

FM Radio Transmitter DIY Kit

1.Introduction:

This is a light cube DIY kit that you need to weld and assemble by yourself. The bottom plate comprises a circuit board and component parts.

2.Parameter:

- 1>.Work Voltage:DC 1.5V~9V
- 2>.Work Current:3.3mA~29mA
- 3>.Work Frequency:85MHz~115MHz
- 4>.Audio Response:20Hz~15KHz
- 5>.Transmitting Frequency:-2dBm~15dBm
- 6>.Output internal resistance: 50ohm
- 7>.Second harmonic:>-40dB
- 8>.Transmission Distance:100~1000meter
- 9>.Receive Device:FM radio/Cellphone which has FM radio function
- 10>.Work Temperature:-40℃~85℃
- 11>.Work Humidity:0%~95%RH
- 12>.Size(Installed):51*29*14mm

3.Function:

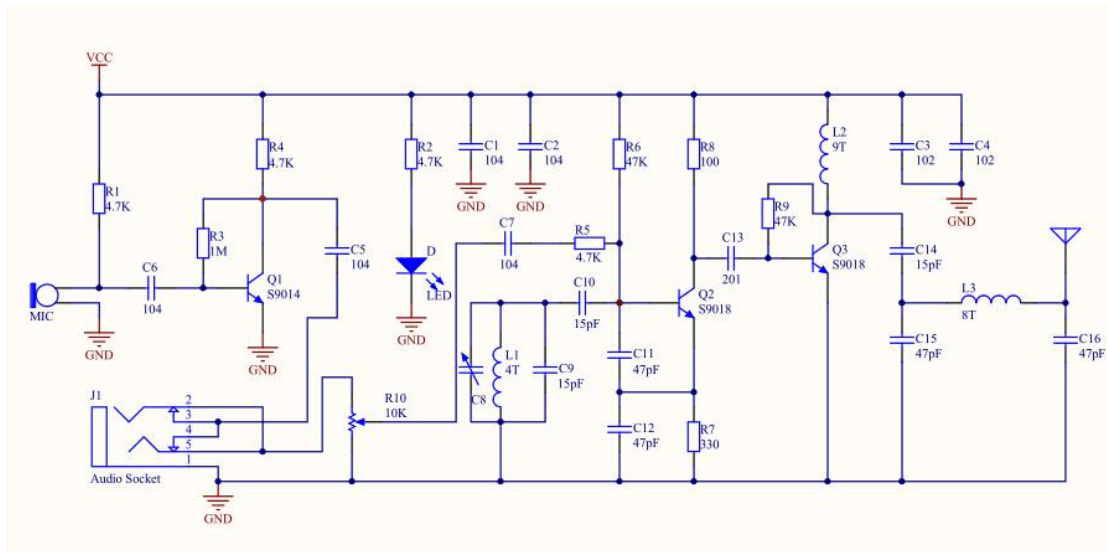
- 1>.Pure DIY installation
- 2>.Ultra-long communication distance
- 3>.Work frequency adjustable

4.Component listing:

NO.	Component Name	PCB Marker	Parameter	QTY
1	Metal Film Resistor	R7	330ohm	1
2	Metal Film Resistor	R3	1M	1
3	Metal Film Resistor	R8	100ohm	1
4	Metal Film Resistor	R1,R2,R4,R5	4.7K	4
5	Metal Film Resistor	R6,R9	47K	2
6	Ceramic Capacitor	C3,C4	102 0.001uf	2
7	Ceramic Capacitor	C9,C10,C14	15pf	3
8	Ceramic Capacitor	C11,C12,C15,C16	47pf	4
9	Ceramic Capacitor	C1,C2,C5-C7	104 0.1uf	5
10	Ceramic Capacitor	C13	201 200pf	1
11	Microphone	MIC		1
12	Red LED	LED	3mm	1
13	4T Inductance	L1		1
14	9T Inductance	L2		1
15	8T Inductance	L3		1
16	5P Audio Socket	J1		1
17	Ceramic Adjustable Capacitor	C8		1
18	Potentiometer	R10	103 10K	1
19	KF-301-2P Connector	J2		1
20	S9014	Q1	TO-92	1
21	S9018	Q2,Q3	TO-92	2
22	PCB		51*29*9mm	1

Note:Users can complete the installation according to the PCB silk screen and component list.

5.Schematic:



6.Installation Tips:

- 1>.User needs to prepare the welding tool at first.
- 2>.This DIY installation is more difficult to be installed, please be patient until the installation is complete.
- 3>.The package is DIY kit.It need finish install by user.
- 4>.The soldering iron can't touch the components for a long time(1.0 second), otherwise it will damage the components.
- 5>.Pay attention to the positive and negative of the components.
- 6>.Strictly prohibit short circuit.
- 7>.Users can complete installation by PCB silk screen and component listing.
- 8>.User must install the LED according to the specified rules.Otherwise some LED will not light.
- 9>.Install complex components preferentially.
- 10>.Make sure all components are in right direction and right place.
- 11>.It is strongly recommended to read the installation manual before starting installation.

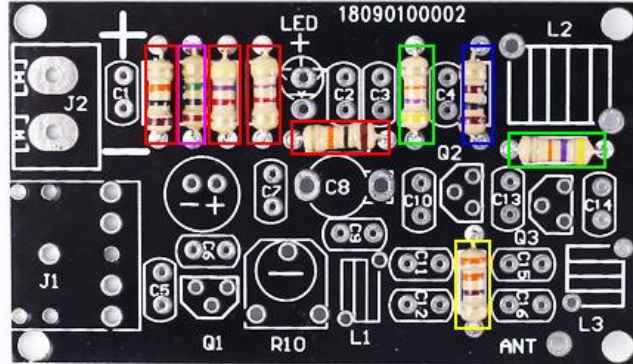
7.Installation Steps(Please be patient install!!!):

- Step 1: Install 1pcs 330ohm metal film resistor at R7 and 1pcs 1Mohm at R3, 1pcs 100ohm at R8, 4pcs 4.7K at R1&R2&R4&R5, 2pcs 47K at R6&R9.
- Step 2: Install 2pcs 0.001uf ceramic capacitor at C3&C4, 3pcs 15pf at C9&C10&C14, 4pcs 47pf at C11&C12&C15&C16, 1pcs 200pf at C13, 5pcs 0.1uf at C1/C2/C5~C7.
- Step 3: Install 1pcs Microphone at MIC.
- Step 4: Install 1pcs Red 3mm LED at LED.
- Step 5: Install 1pcs 4T Inductance at L1 and 9T at L2,8T at L3.
- Step 6: Install 1pcs TO-92 S9014 at Q1.
- Step 7: Install 1pcs TO-92 S9018 at Q2&Q3.
- Step 8: Install 1pcs Ceramic Adjustable Capacitor at C8.
- Step 9: Install 1pcs 5P Audio Socket at J1.
- Step 10: Install 1pcs 10Kohm Potentiometer at R10.
- Step 11: Install 1pcs KF-301-2P Connector at J2.

8.Install shown steps:

Step 1: Install

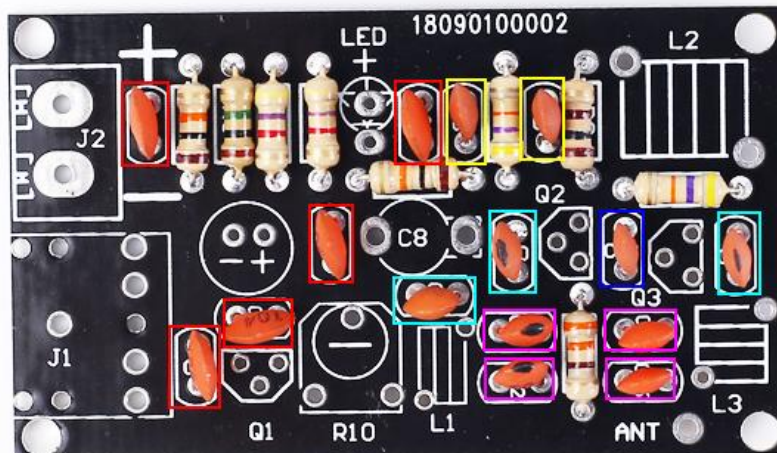
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 2pcs 47K at R6&R9.



R1&R2&R4&R5 R3 R6&R9 R7 R8

Step 2: Install 2pcs 0.001uf ceramic capacitor at C3&C4,
 3pcs 15pf at C9&C10&C14,
 4pcs 47pf at C11&C12&C15&C16,
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C1&C2&C5~C7 C3&C4 C9&C10&C14

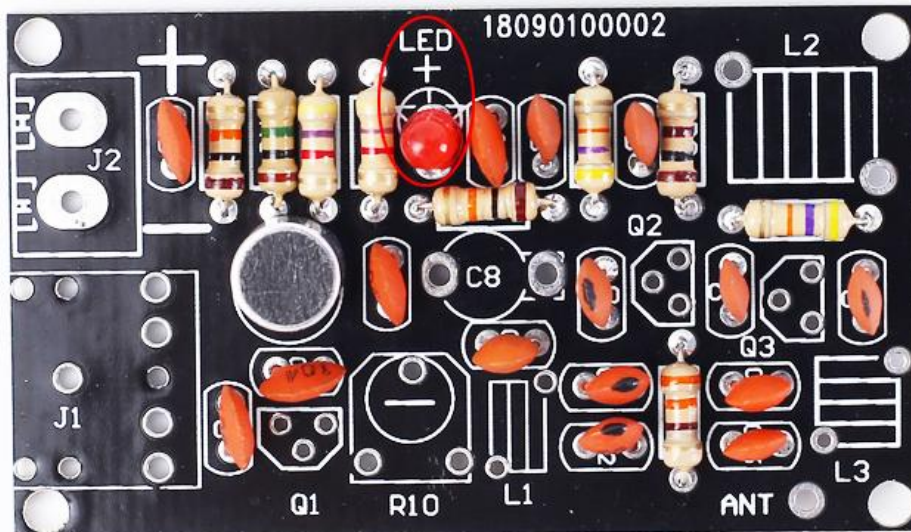


C11&C12&C15&C16 C13

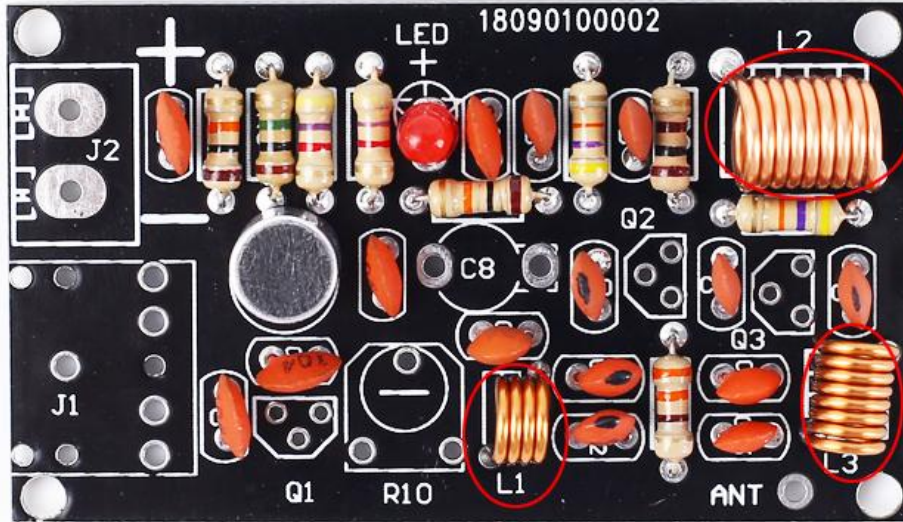
Step 3: Install 1pcs Microphone at MIC.



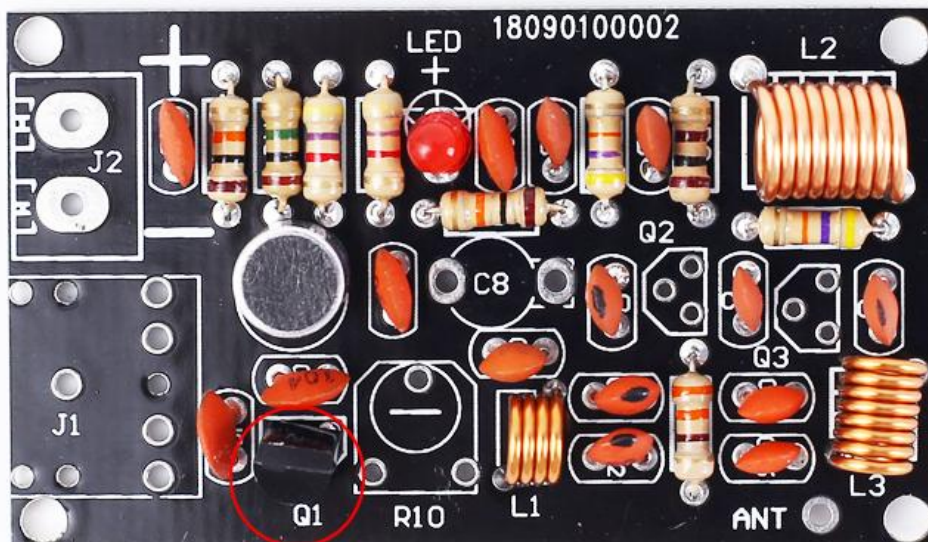
Step 4: Install 1pcs Red 3mm LED at LED.



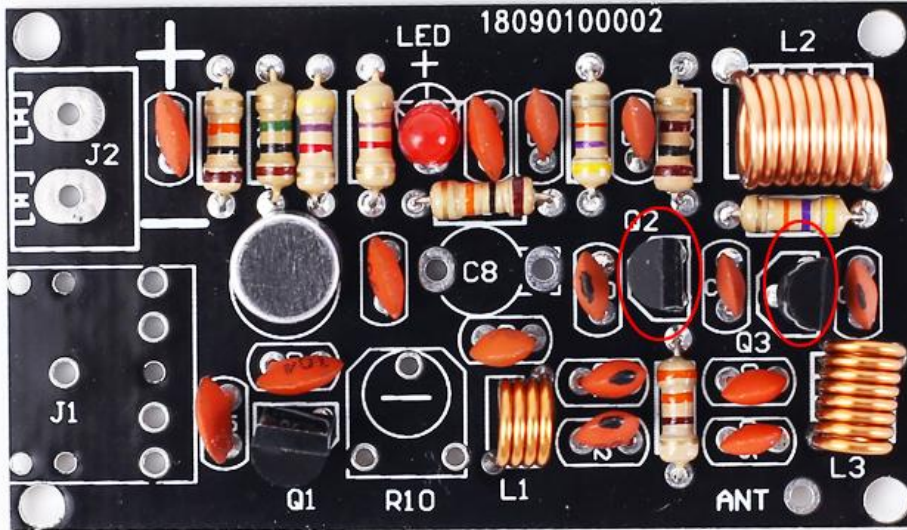
Step 5: Install 1pcs 4T Inductance at L1 and 9T at L2,8T at L3.



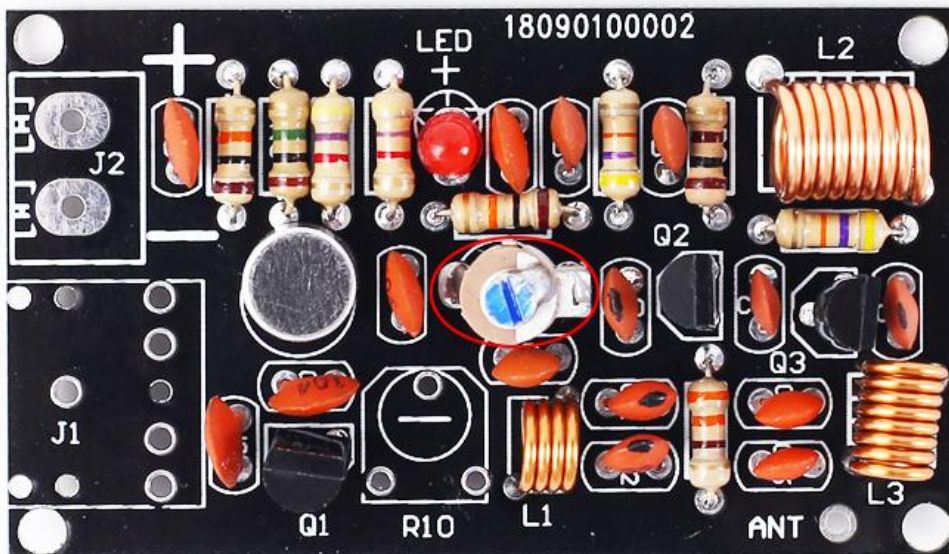
Step 6: Install 1pcs TO-92 S9014 at Q1.



Step 7: Install 1pcs TO-92 S9018 at Q2&Q3.



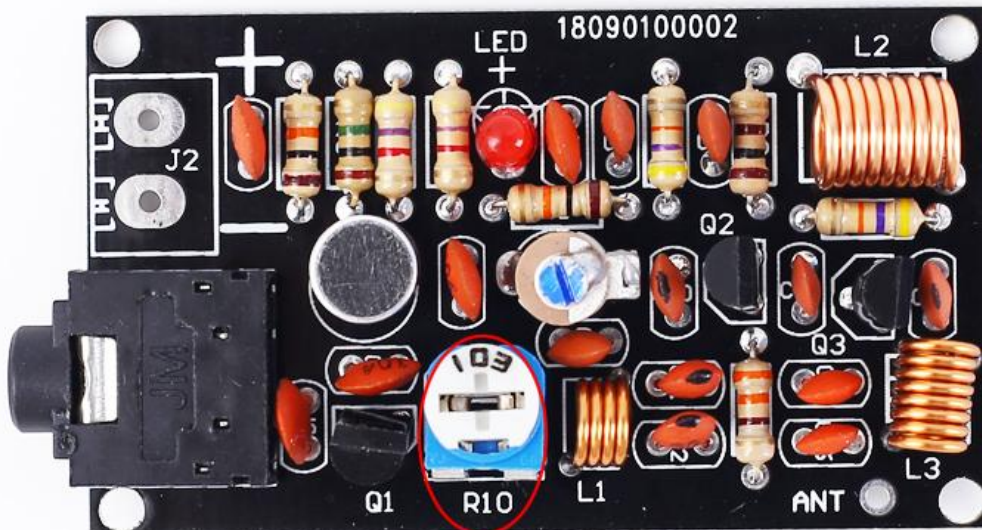
Step 8: Install 1pcs Ceramic Adjustable Capacitor at C8.



Step 9: Install 1pcs 5P Audio Socket at J1.



Step 10: Install 1pcs 10Kohm Potentiometer at R10.



Step 11: Install 1pcs KF-301-2P Connector at J2.

