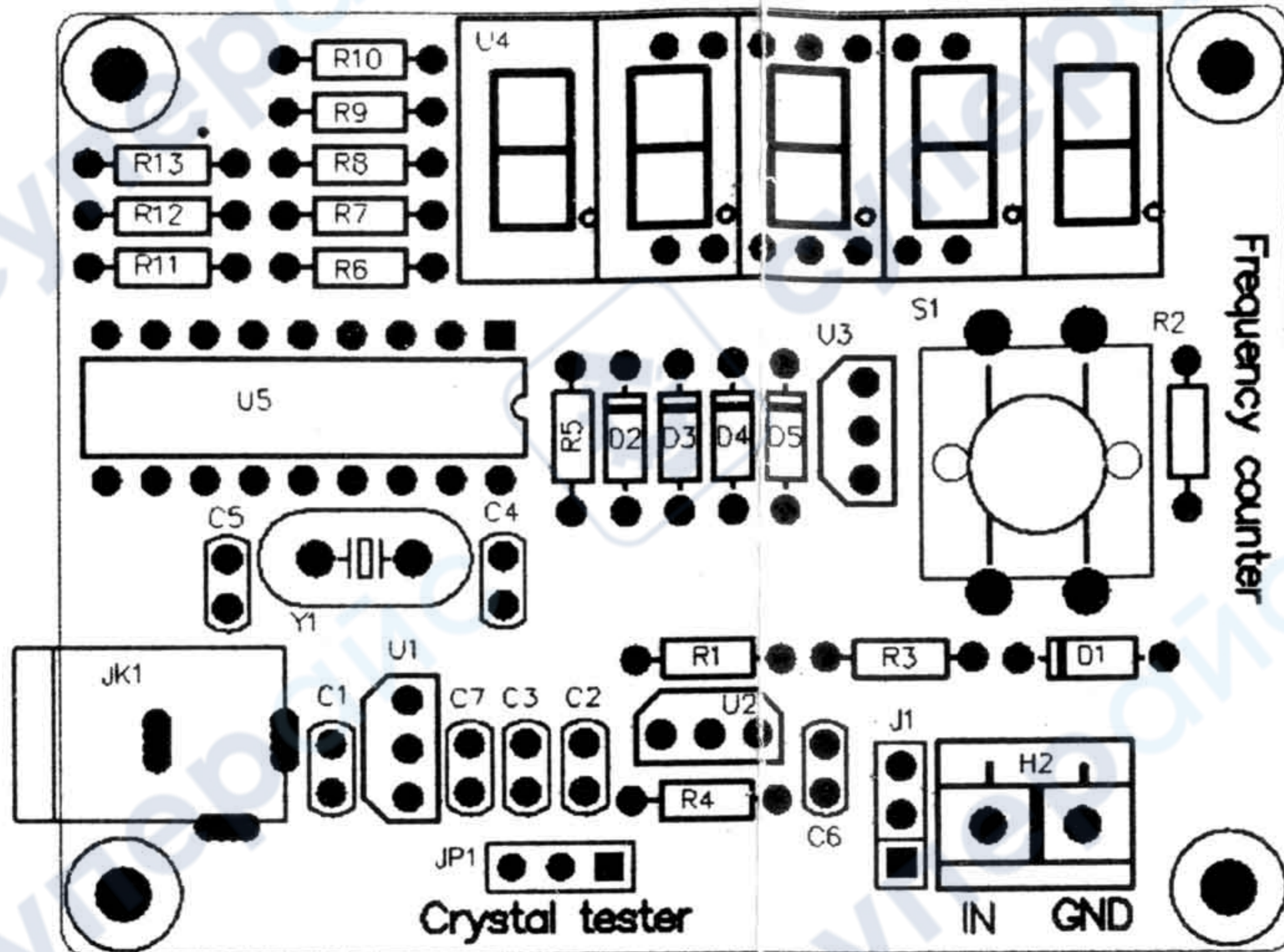


# Frequency counter installation instructions

## 1. Frequency counter component layout diagram



## 2. Frequency counter parameter table

Note	label	type	parameters
R1	resistor	100K	Regardless of the polarity
R2,R3,R5	resistor	10K	Regardless of the polarity
R4	resistor	1K	Regardless of the polarity
R6-R13	resistor	1K	Regardless of the polarity
Y1	crystals	20M	Regardless of the polarity
S1	switch	SW	Regardless of the polarity
C1, C7	Ceramic capacitor	104 0.1UF	Regardless of the polarity
C6	Ceramic capacitor	102	Regardless of the polarity
C2,C3	Ceramic capacitor	22P	Regardless of the polarity
C4,C5	Ceramic capacitor	22P	Regardless of the polarity
D1-D5	diode	IN4148	Black in the negative
U1	5 v voltage regulator	7550-1	(by screen printing layer)
U2,U3	NPN	S8050	(by screen printing layer)
U4	LED displays		(by screen printing layer)
U5	microcontroller	PIC16F628A	(by screen printing layer)
JK1	DC POWER		(by screen printing layer)
JP1	3pin crystals interface	3pin hole seat	
H2	Signal wire terminal	blue	(by screen printing layer)
J1	3PIN Jumper cap	3PIN	

### 3. The welding installation considerations, follow these steps:

1. The components are welding the front board, from low to high principles, namely the first low welding components, such as crystals, capacitor, resistor, diode, round hole row of seats, etc.
2. The welding microcontroller header, and then welding, triode, button, a power outlet.
3. The back with a diagonal cutting pliers to cut short the pins as far as possible

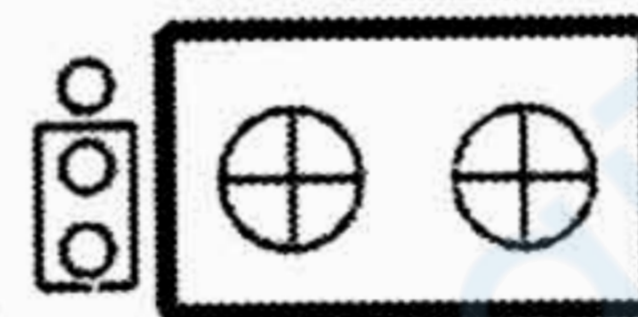
### 4. Debugging steps:

1. After completion of welding on IC, microcontroller PIC16F628, pay attention to the direction of IC, insert the might damage the chip!
2. check the IC whether against, such as anti please timely correction.
3. After the check, the electricity, the fourth digital tube display 0. Said the installation was successful!

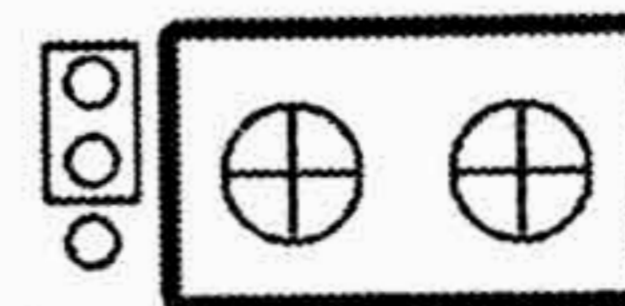
### 5. Using the step:

1. Before measuring signal, please switch J1 jumper cap

Blue terminals for the IN for signal input, GND for GND signal, input signal amplitude can not higher than 30 v, otherwise may damage the frequency meter.



2. Before measuring crystal please switch the J1 jumper cap, to 40 m crystals can measure the crystal frequency



in JP1 insert 4 m

