

# Digital Capacitance Meter Kit

Available from [www.dpcav.com](http://www.dpcav.com)

Part Number #DCAP-K60

## Features

- Less than 2% error. No calibration needed
- Measurement range: 1pF - 500uF
- Automatic range select
- Zeroing
- Real time serial output of measurement with time stamp
- Low cost

## How to assemble

It is straightforward to assemble the cap meter. First, install all parts included in the kit onto the PCB following schematic and labels. After soldering make two modifications as shown in Fig 1 and Fig 2.

- 1) Cut the trace between pin 14 of U1 and R4 (Fig. 1).
- 2) Connect pin 27 of U1 with R4 (Fig. 2).

After re-checking to ensure no solder errors the cap meter can be powered up and put into use.

## How to Use

### Measurement:

Insert the capacitor to be tested into J5. Capacitance will be displayed. Alternatively caps not fit into J5 can be connected through J3 with a pair of clips. Usually large caps take longer to show results but should not longer than 2 seconds. **Please note that when testing caps with polarity it positive pin should be connected to the 3 holes of left hand side.** We recommend to mark a "+" sign at the left hand side of J5 as a reminder (this will be added in next version of PCB).

### Zeroing:

Remove cap (if any) from J5 and J3. Press the "ZERO" button. "C0" will display. Wait for it to disappear. Now the stray capacitance is compensated. The compensation value is stored in EEPROM and will remain in effect until another zeroing is performed. **To obtain good measurement results for small capacitance shielding is required. To do this put the board into a metal box and connect the ground of the meter to the enclosure.**

### Serial Data Format:

The ASCII outputs from TXD pin of J4 include sequence number, measurement time (in seconds), and measured capacitance. The baud rate is 38.4Kbps fixed. The data format is 8 data bits, 1 stop bit, and no parity.

## Specifications

Error:	< 2%
Range:	1pF – 500pF
Power Supply voltage:	9 – 12 DC
Power Supply current:	<30mA

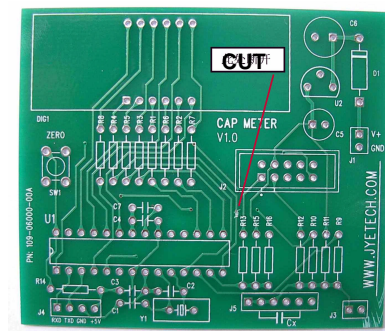


Fig. 1

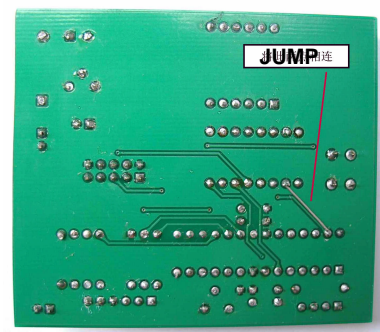


Fig. 2