CALIBRATION PROCEDURE

WARNING

To avoid electrical shock, do not perform any service unless you are qualified to do so. If you do not have high precision calibrator or source, do not calibrate this device. Before you calibrated this device, please use calibrator to verify this device what all specifications meet the requirement of electrical specification or not. If it can meet all specification, do not use following procedure to calibrate this device.

1. How to entry calibration mode.

Press and hold **REL** button then push ON/OFF switch to ON position.
Release pressing **REL** button after the LCD lit. The LCD will indicate "**CSEE**".
Now, press and hold **SET** entry calibration mode.

2. Calibration procedure

(1) The small digits will indicate" rdy " and the large digits will indicate which value must be input. The input must be a standard capacitor.

(2) After you setting the input source to meter, then push the SET button momentarily to do auto-calibration. You will find the small digits indicate "CAL" during calibration period.

(3) If the input source and measuring reading of meter meet the tolerance, the small digits will indicate "rdy" again, and automatic set the next range calibration. Please refer to above step (1) ~ (3) to calibrate other ranges.

(4) Please refer to following standard values for different range:

$$000.0pF \rightarrow 328.0pF \rightarrow 0.000nF \rightarrow 3.231nF \rightarrow$$
$$00.00nF \rightarrow 32.05nF \rightarrow 320.2nF \rightarrow 3225nF \rightarrow$$
$$32.07uF \rightarrow 185.0uF \rightarrow 1830uF \rightarrow 01.83mF \rightarrow PAS \circ$$

(5) If you do not have completely equal capacitor, you can use the buttons of Left, Right, UP and Down to adjust the standard value.

3. Error message

The small digits will indicate some messages, it means the meter must be fixed. We have explained error messages as below:

※**E01** : the reading of meter less than tolerance 20 % of calibration value.

※**E02** : the reading of meter greater than tolerance 20% of value.

※**E03** : the reading of meter is getting negative over range(-OL)

※ **E04** : the reading of meter is getting positive over range(+OL)

※ **E05** : EEPROM（93C46）Read / Write error, re-calibrate again, if same condition be happened, please replace the EEPROM.

※ **E06** : The reading of meter is unstable. Push SET button momentarily to re-calibrate meter again. If same condition be happened, please check the meter and source.

4. Attention items:

※Capacitance function:
000.0 *pF*, 0.000*nF*, 00.00*nF means the input jacks must be opened.*

5. Push-button operations at calibration mode

(1) DH (MAX · MIN) : Push this button momentarily to select which digit will be adjusted for standard value. You can find that the digit will flash. Push this button will cycle through digit 4→digit 3→digit 2→digit 1→digit 4.

(2) ◀ **(LEFT)**: Push this button momentarily to select which digit will be adjusted for standard value. You can find that the digit will flash. Push this button will cycle through digit 1→digit 2→digit 3→digit 4→digit 5.

(3) ▶ **(RIGHT)**: Push this button momentarily to adjust digit for calibration value. Normal, we have define the standard value on the large digits, you do not change it.
Digit 4   : 0→1→2→3→4→0
Digit 3-1 : 0→1→2→3→4→5→6→7→8→9→0

(4) SET   : Push this button momentarily to start the calibration, and the small digits will indicate "**CAL**".

(5) HI/LO: Press this button momentarily to select calibration range.

(6) ▲ **(UP):** Press this button momentarily to increase 1 count for present digit. Press and hold this button will repeat above action.

(7) ▼**(DOWN):** Press this button momentarily to decrease 1 count for present digit. Press and hold this button will repeat above action.

Following two drawing, you could find the component position on the PCB.

Figure 1. Component position of top PCB
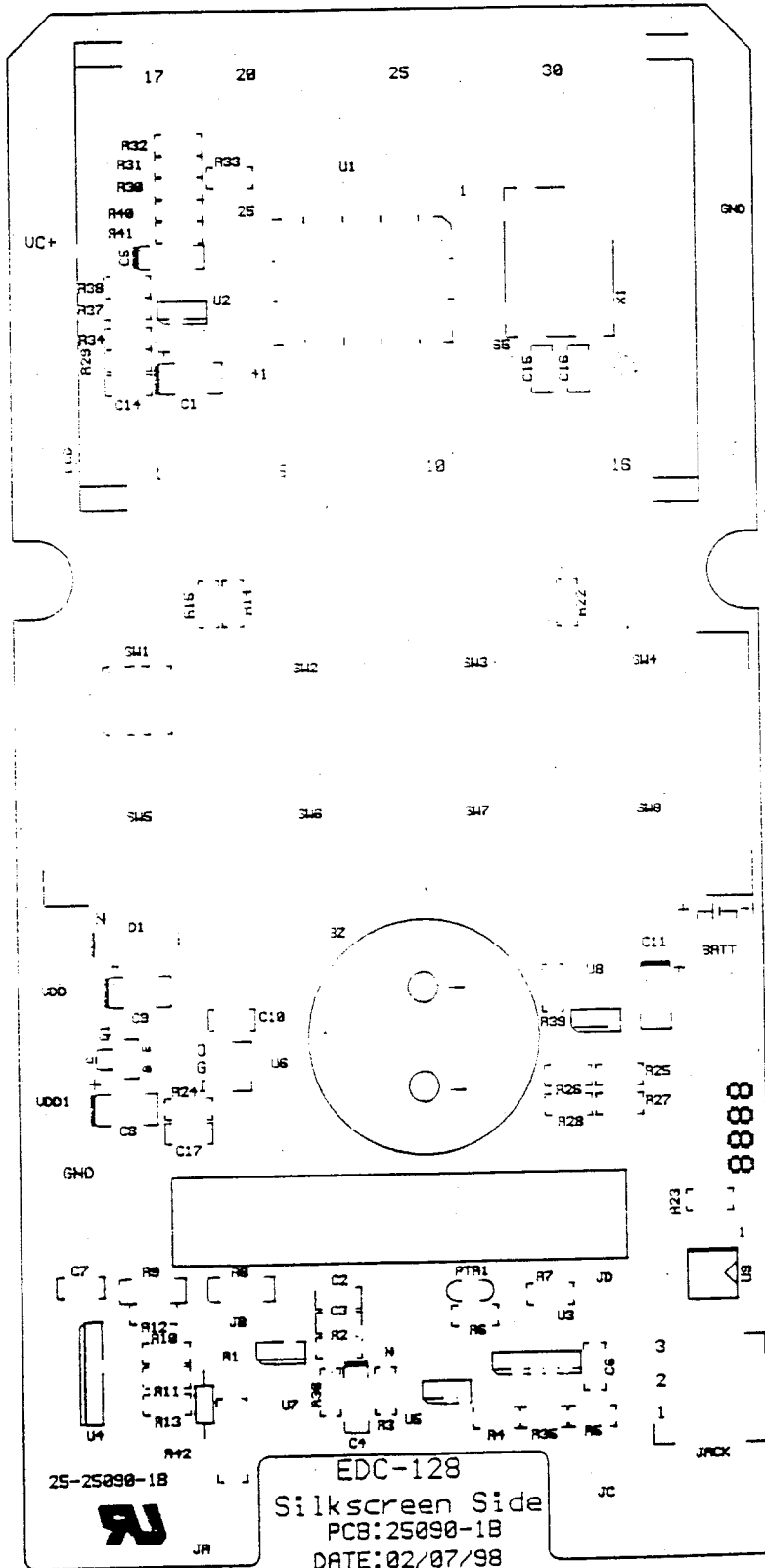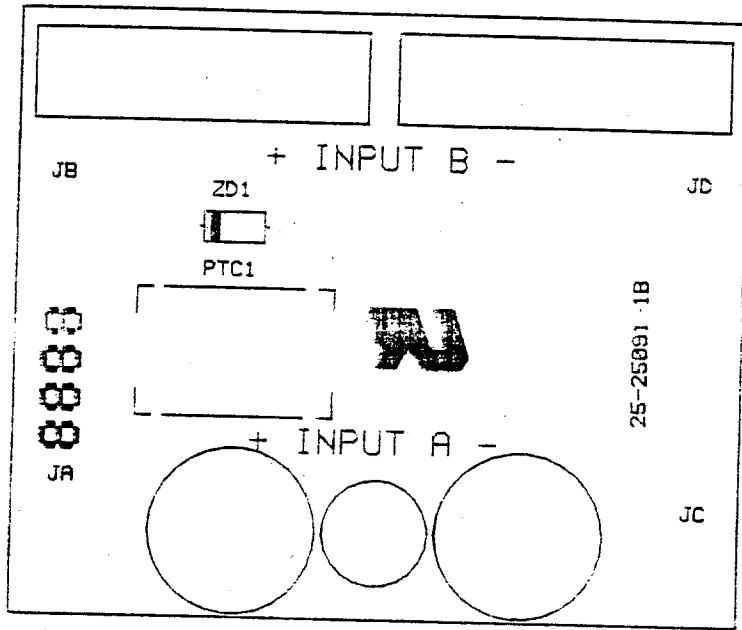
Figure 2. Component position of bottom PCB