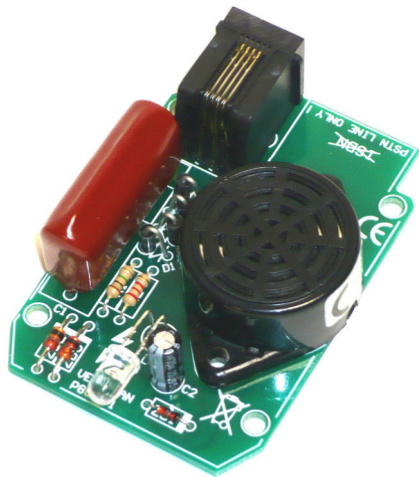


Total solder points: 30

Difficulty level: beginner 1  2  3  4  5  advanced

## TELEPHONE RINGER WITH BUZZER AND LED



# K8087

Simply connect in parallel with phone line.  
Accepts standard adaptor & telephone plug.



**Features:**

- ☑ accepts standard telephone plug
- ☑ simply connect in parallel with phone line
- ☑ no power supply necessary!
- ☑ buzzer sounds and powerful led flashes when phone rings
- ☑ great for noisy environments, for the hearing impaired, as additional ringer, to replace existing ringer,...

**Specifications:**

- 10.000 mcd led !
- connects to PSTN line
- RJ11 connector
- consumption: 10mA max.
- dimensions: 80x55x35mm / 3,15 x 2,16 x 1,37"

**Includes:**

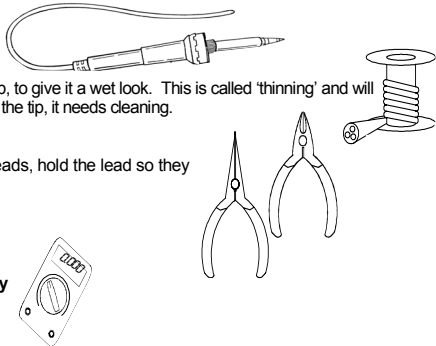
- attractive enclosure
- adhesive strips for easy fixing

## 1. Assembly (Skipping this can lead to troubles !)

Ok, so we have your attention. These hints will help you to make this project successful. Read them carefully.

### 1.1 Make sure you have the right tools:

- A good quality soldering iron (25-40W) with a small tip.
- Wipe it often on a wet sponge or cloth, to keep it clean; then apply solder to the tip, to give it a wet look. This is called 'thinning' and will protect the tip, and enables you to make good connections. When solder rolls off the tip, it needs cleaning.
- Thin raisin-core solder. Do not use any flux or grease.
- A diagonal cutter to trim excess wires. To avoid injury when cutting excess leads, hold the lead so they cannot fly towards the eyes.
- Needle nose pliers, for bending leads, or to hold components in place.
- Small blade and Phillips screwdrivers. A basic range is fine.



**For some projects, a basic multi-meter is required, or might be handy**

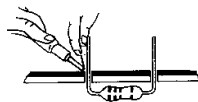
### 1.2 Assembly Hints :

- ⇒ Make sure the skill level matches your experience, to avoid disappointments.
- ⇒ Follow the instructions carefully. Read and understand the entire step before you perform each operation.
- ⇒ Perform the assembly in the correct order as stated in this manual
- ⇒ Position all parts on the PCB (Printed Circuit Board) as shown on the drawings.
- ⇒ Values on the circuit diagram are subject to changes.
- ⇒ Values in this assembly guide are correct\*
- ⇒ Use the check-boxes to mark your progress.
- ⇒ Please read the included information on safety and customer service

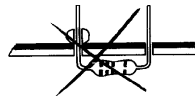
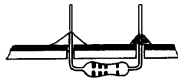
\* Typographical inaccuracies excluded. Always look for possible last minute manual updates, indicated as 'NOTE' on a separate leaflet.

**1.3 Soldering Hints :**

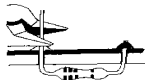
1- Mount the component against the PCB surface and carefully solder the leads



2- Make sure the solder joints are cone-shaped and shiny

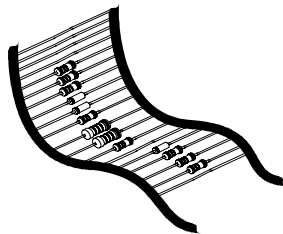


3- Trim excess leads as close as possible to the solder joint



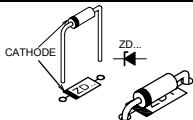
**REMOVE THEM FROM THE TAPE ONE AT A TIME !**

**AXIAL COMPONENTS ARE TAPED IN THE  
CORRECT MOUNTING SEQUENCE !**



### 1. Zener diodes. Watch the polarity!

- ZD1 : 12V0
- ZD2 : 20V0
- ZD3 : 20V0

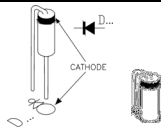


### 2. Resistors

- 
- R1 : 1M (1-0-5-B)
  - R2 : 2K2 (2-2-2-B)

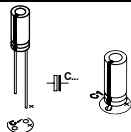
### 3. Vertical diodes. Watch the polarity!

- D1 : 1N4007
- D2 : 1N4007
- D3 : 1N4007
- D4 : 1N4007



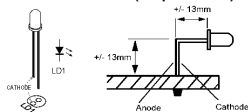
### 4. Electrolytic Capacitors. Watch the polarity !

- C2 : 10 $\mu$ F / 35V



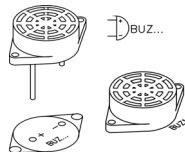
### 5. LED. Watch the polarity!

- LD1 : 5mm (super red)



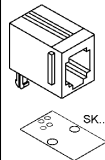
### 6. Buzzer

- BUZ1



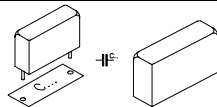
### 7. Modular Jack

- SK1 : 4p (type RJ11)

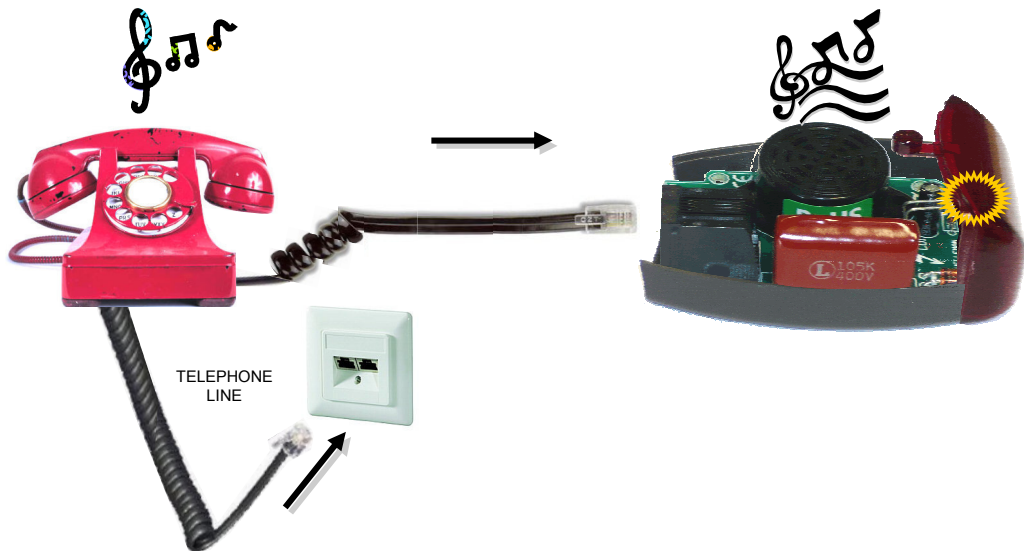


### 8. Capacitor

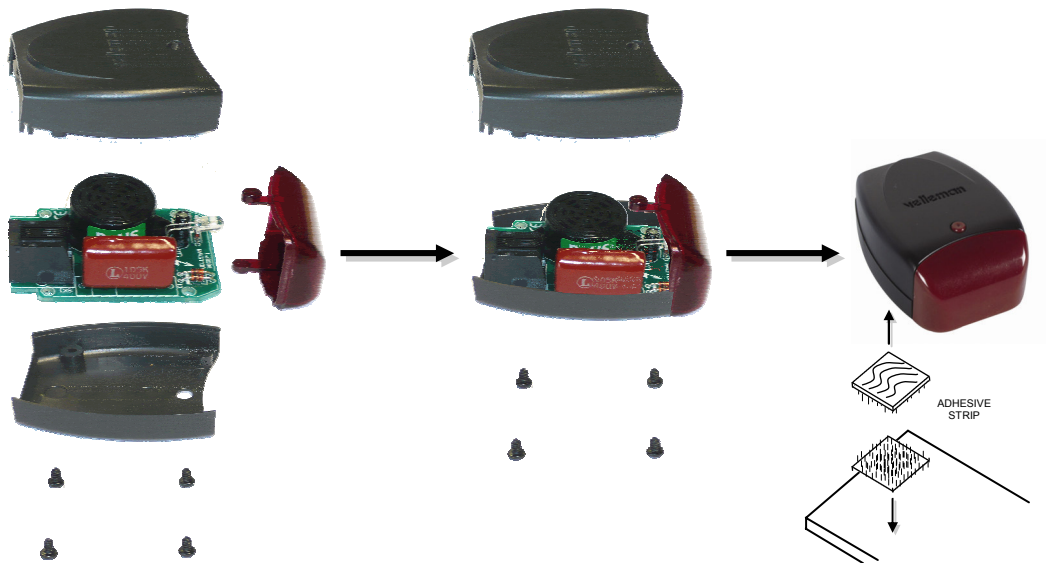
- C1 : 1 $\mu$ F / 275VAC



9. Connection

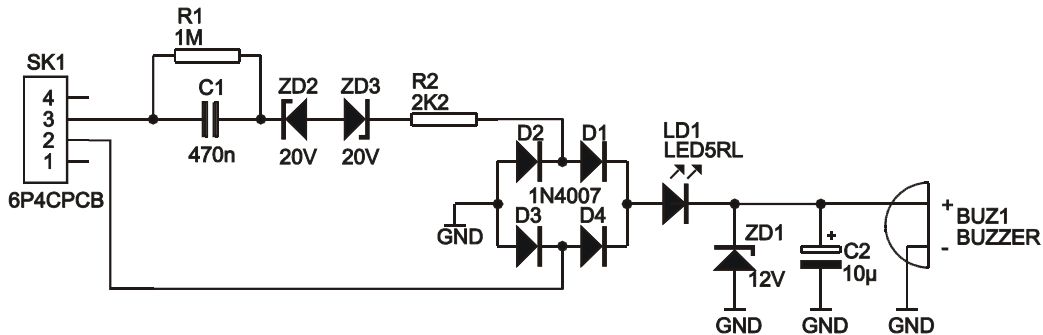


## 10. Assembly

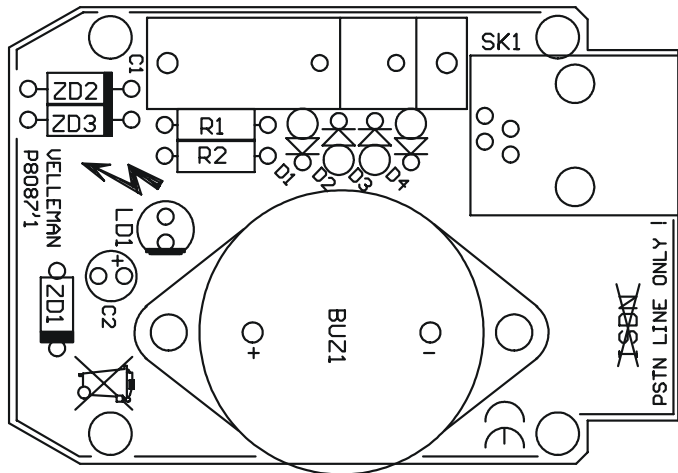




Schematic diagram.



## PCB







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H8087IP'1 - 2007

