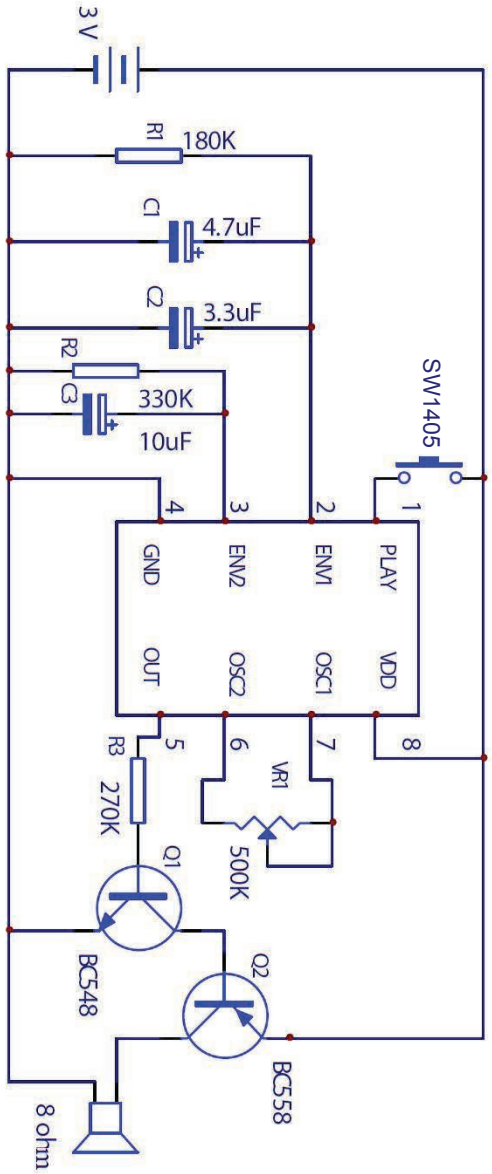
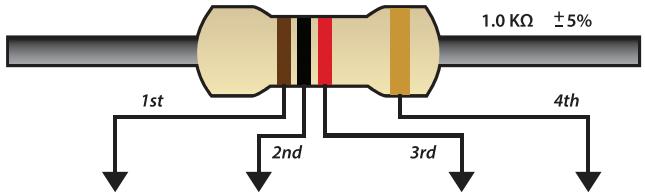
Schematic Diagram



RESISTOR COLOUR CODE GUIDE



Colour	1st Band	2nd Band	Decimal Multiplier		Tolerance
Black	0	0	1	1	
Brown	1	1	10	10	± 1%
Red	2	2	100	100	± 2%
Orange	3	3	1K	1000	
Yellow	4	4	10K	10,000	
Green	5	5	100K	100,000	
Blue	6	6	1M	1,000,000	
Violet	7	7	10M	10,000,000	
Grey	8	8	100M	100,000,000	
White	9	9	1000M	1,000,000,000	
Gold				0.1	± 5%
Silver				0.01	± 10%
None					± 20%

More Kits In The Range

KI0205 Ding Dong Door Chime Kit
KI0236 Wailing Siren Kit
KI0208 Light Alarm Kit
KI0211 Moisture Sensor Kit
KI0213 Electronic Dice Kit
KI0231 9V DC Siren Kit

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(KI0205)

Ding Dong Door Bell Kit

Tekky Kit

COMPONENTS

Component List

Designator	Part Description	Part No.
R1	180K 0.25W Resistor (Brown, Grey, Yellow)	RS1755
R2	330K 0.25W Resistor (Orange, Orange, Yellow)	RS1785
R3	270K 0.25W Resistor (Red, Purple, Yellow)	RS1775
U1	Door Chime I.C.	HK527
C1	4.7uF, 50V Electro Capacitor	CC1412
C2	3.3uF 50V Electro Capacitor	CC1408
C3	10uF 35V Electro Capacitor	CC1417
VR1	500K TL1 Trimpot	PT8175
SW	Push - On (ON) Switch	SW1405
SPK	57mm 8 ohm 0.5W Speaker	SP1203
Q1	TO-92 NPN Transistor	BC548
Q2	TO-92 PNP Transistor	BC558
PCB	Printed Circuit Board	PC9105
Bat	AAA x 2 Battery Holder w/ lead	BA9145
Wire	Hookup Wire (to switch) 50cm	CB2201GRY
Wire2	Speaker cable Fig8 L/Duty 10cm	CB0102

☐ R1 ☐ R2 ☐ R3

☐ U1

☐ C1 ☐ C2 ☐ C3

☐ VR1

☐ SW1405

☐ SPK

☐ Q1 ☐ Q2

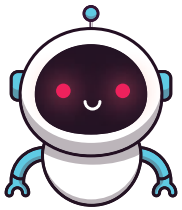
☐ Bat

☐ Wire

☐ PCB

☐ Wire2

CIRCUIT DESCRIPTION



Circuit Description

The Ding Dong Door Chime is a single IC circuit with two Resistor/Capacitor (RC) networks. These RC networks control the Ding and the Dong respectively.

Increasing the value of the capacitor C1 will increase the time duration of the Ding (time envelop 1) and increasing C3 will increase the duration of the Dong (time envelop 2).

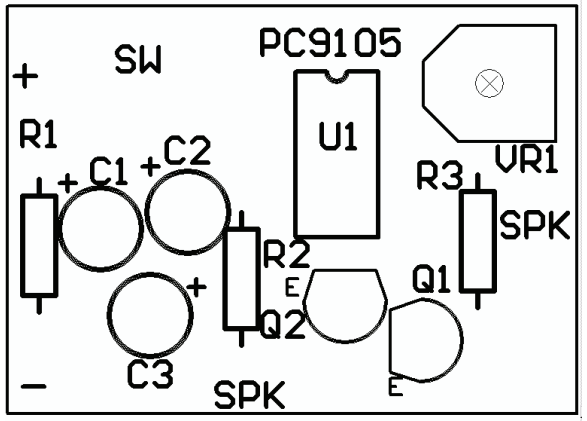
The circuit is designed to run on 3V DC, two 1.5V batteries connected in a series circuit. The IC has a maximum voltage rating of 4.5V. IC pin 8 (VDD) is connected to battery positive (+ve) and pin 4 (GND) is connected to battery negative (-ve).

The tone or pitch of the audio output from the IC is controlled by pin 7 (oscillator 1) and pin 8 (oscillator 2) the trimpot or variable resistor VR1 is connected across pins 7 and 8.

Varying the resistance of VR1 will change the oscillator frequency resulting in a change in the audible tone of the door bell.

CONSTRUCTION

PCB Component Overlay



The two transistors Q1 and Q2 operate as an audio amplifier feeding the audio (Ding Dong sound) to the speaker.

Construction

Using the component overlay, the component list and the circuit diagram load and solder the components into the solder joints and your component placements are all okay.

Now check your batteries with a multimeter to ensure they are okay.

Fit the batteries and the Door Bell should work.

Try adjusting VR1 until you are happy with the tone.

You can experiment with the timing by clipping on extra capacitors in parallel across the pins of C1 and C3.