

# Knight Rider Light Effect

a 4017B Johnson counter is used in this electronic project to create a light effect similar to that of 'KITT' in Knight Rider.

Oops there I give away my age young people will not know about the TV show Knight Rider with a car called 'KITT' 😊

Happy building if you have any questions please contact us!

### TOOLS REQUIRED

- 1) Small side cutter 2) Small flat screwdriver.

### BEFORE YOU START

Remove the paper strip of the resistors and diodes by cutting it away. If you just pull it of some of the glue will remain this will prevent it from making electric contact.

You will need to identify each component by observing the following characteristics.

### RESISTORS

Do not have any polarity you can insert any terminal in to any respective hole.

### LED (Light Emitting Diode)

LED's do have polarity and must be placed the correct way round into the circuit its polarity is indicated by a long and short terminal. The short terminal is the cathode (-) and the long terminal is the anode (+).

### Flashing LED

To find the flashing led look for a small black dot inside and on top of one terminals.

### 1N4148 Rectifier Diode

1N4148 Rectifier Diode is a small axial leaded components witch appear as if they are made from glass. Diodes do have

polarity and the Cathode terminal is indicated by a black band around one of the components sides.

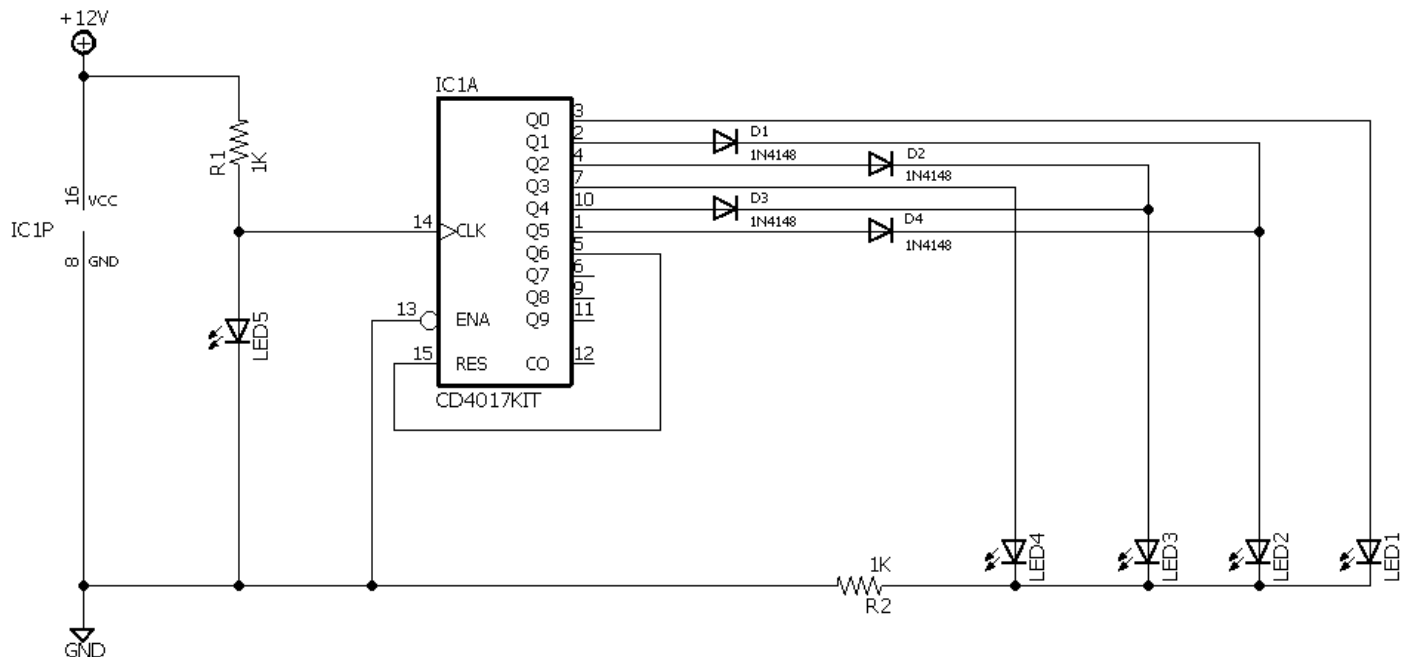
### 4017B IC (Integrated Circuit)

This component has 16 terminals and to find pin1 you must put the reference mark ( a pressed 1/2 circle ) at 12 O clock then pin1 is on the left now you count counter clock wise and you will see that pin 16 is on the right.

### COMPONENTS REQUIRED

Electronic Workstation	JH656 X 1
4cm Red connecting wire	X 1

4cm Blue connecting wire	X 4
4cm Black connecting wire	X 2
7cm Green connecting wire	X 1
7cm Orange connecting wire	X 1
7cm Yellow connecting wire	X 2
7cm Black connecting wire	X 1
7cm Brown connecting wire	X 1
15cm Orange connecting wire	X 1



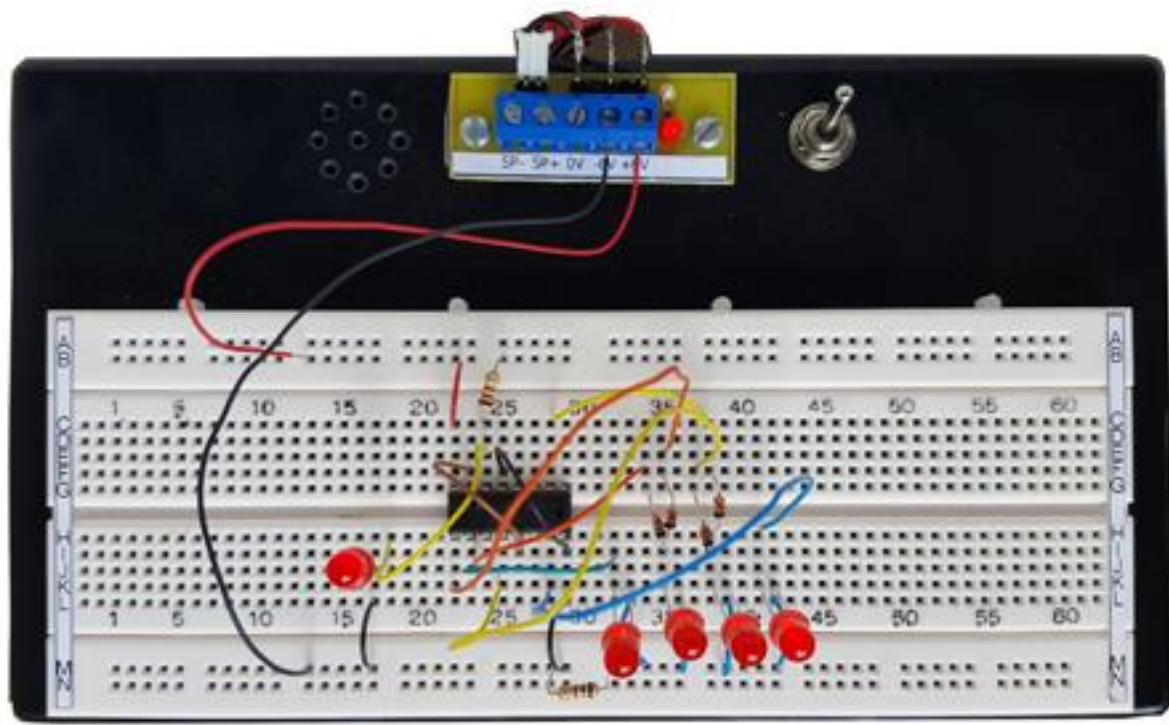
15cm Yellow connecting wire	X 1
15cm Blue connecting wire	X 1
15cm Red connecting wire	X 1
15cm Black connecting wire	X 1
1k $\Omega$ Resistor 1/4 Watt 5% (brown, black, red, gold)	DB056 X 2
4017B IC (DIP16)	HB127 X 1
5mm Red LED	HB077 X 4
5mm Red Flashing LED	DB244 X 1
1N4148 Rectifier Diode 100V 75mA	HB052 X 4

**CONFIGURATION TABLE**

1K $\Omega$ Resistor 1/4 Watt 5% (brown, black, red, gold)	B25 - C24
1K $\Omega$ Resistor 1/4 Watt 5% (brown, black, red, gold)	M28 - M32
4017B IC (reference mark must be on the left side)	
Pin1	H22
Pin16	G22
5mm Red LED	
Cathode (-) flat side	K33
Anode (+)	K32
5mm Red LED	
Cathode (-) flat side	K36
Anode (+)	K35
5mm Red LED	
Cathode (-) flat side	K39
Anode (+)	K38
5mm Red LED	
Cathode (-) flat side	K42
Anode (+)	K41

5mm Red Flashing LED	
Cathode (-) flat side	J17
Anode (+)	J18
1N4148 Diode 100V 75mA	
Cathode (black or yellow band)	I35
Anode	G34
1N4148 Diode 100V 75mA	
Cathode (black or yellow band)	H35
Anode	F35
1N4148 Diode 100V 75mA	
Cathode (black or yellow band)	I38
Anode	G37
1N4148 Diode 100V 75mA	
Cathode (black or yellow band)	H38
Anode	F38
4cm Red connecting wire	B22 - C22

4cm Black connecting wire	L17 - M17
4cm Black connecting wire	L29 - M29
4cm Blue connecting wire	L33 - M33
4cm Blue connecting wire	L36 - M36
4cm Blue connecting wire	L39 - M39
4cm Blue connecting wire	L42 - M42
7cm Yellow connecting wire	C28 - C38
7cm Yellow connecting wire	E24 - H18
7cm Brown connecting wire	F23 - I26
7cm Black connecting wire	F25 - I29
7cm Orange connecting wire	F34 - J23
7cm Green connecting wire	I32 - J24
15cm Orange connecting wire	E35 - K22



15cm Yellow connecting wire	F37 - K25
15cm Blue connecting wire	H41 - K28
15cm Red connecting wire	B13 - (+ 6V)
15cm Black connecting wire	M13 - (-6V)

#### **COMPANY DETAILS**

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