
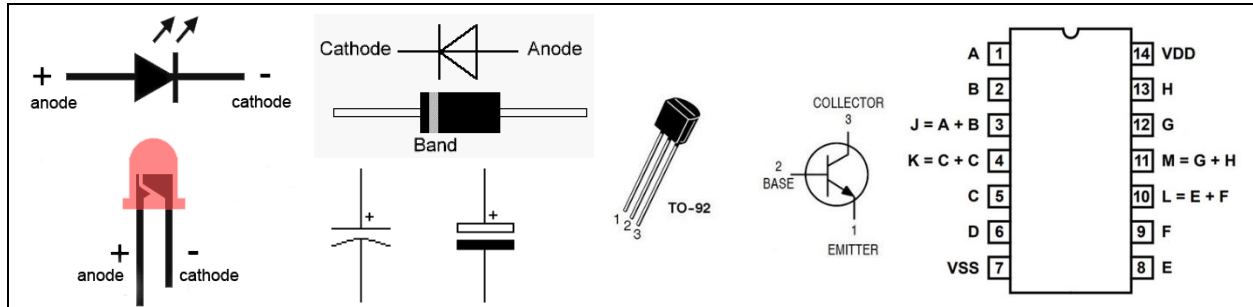


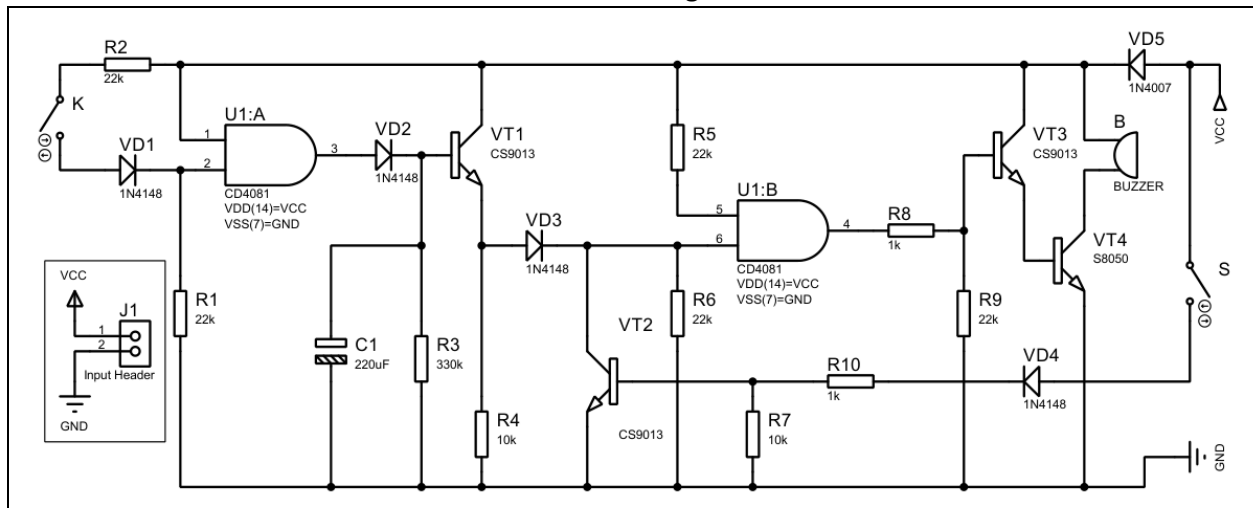
## STS-064 MOTORCYCLE ANTI-THEFT BURGLAR ALARM LOOSE ELECTRONIC DIY KIT

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| <p><b>Supply voltage: 5.0v (DC voltage)</b><br/><b>Board size: 40*55mm</b></p>  | <p><b>Component List:</b></p> <ul style="list-style-type: none"> <li>Resistor 1k – 2 = R8 &amp; R10</li> <li>Resistor 10k – 2 = R4 &amp; R7</li> <li>Resistor 22k – 5 = R1, R2, R5, R6, R9</li> <li>Resistor 330k – 1 = R3</li> <li>Diode 1N4007 – 1 = VD5</li> <li>Diode 1N4148 – 4 = VD1 – VD4</li> <li>Transistor 9013 – 3 = VT3, VT2, VT1</li> <li>Transistor 8050 – 1 = VT4</li> <li>Capacitor 220uF – 1 = C1</li> <li>IC CD4081 – 1 = U1</li> <li>Buzzer – 1 = B</li> <li>Mercury Switch – 1 = K</li> <li>Self-Locking Switch – 1 = S</li> <li>Terminal Block 2w – 1 = J1</li> <li>PCB Circuit Board = 1</li> </ul> |
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### Components Symbol



### Schematic Diagram



## Introduction:

This Motorcycle Anti-Theft Alarm circuit utilize CD4081 IC as main controller. When the vehicle or the motorcycle is started without the key, it will emit a loud alarm sound to attract the attention of passers-by.

## Circuit Operation:

K is the mercury conductive switch and S is the power switch linked with the car key. After the car is parked, put the switch in the "OFF" position and then pull out the key. At this time, the two contacts in the mercury conductive switch K are disconnected, the "2" pin of the U1A input terminal is at a low level, so the "3" pin outputs a low level. Then the diode VD2 will cut off, the triode transistor VT1 and the other diode VD3 are also cut off. The "6" pin of the input terminal of U1B is low level, so the output terminal "4" pin outputs low level. Then the transistors VT3 and VT4 are both cut off and the alarm horn B does not sound.

If someone moves the car, it will inevitably cause vibration. This will make the mercury conductive switch K closed instantly (Mercury Switch Turn ON) and thus diode VD1 will turn on. This will cause both input terminals of U1A are high level. Then "3" pin outputs a high level making VD2 conduction and charging the capacitor C1. The transistor VT1 is turned on at the same time, the emitter outputs high level through VD3. When "6" pin of U1B is high level, the "4" pin will outputs high level. Then the alarm horn is amplified by VT3 and VT4 to make an alarm sound.

When the owner of vehicle wanted to drive, first insert the key, set the switch to the "ON" position. The positive current is injected into the base of VT2 through VD4 and R10. Then the transistor VT2 is turned on, so that the "6" pin of U1B is clamped at low level, U1B blocked. At this time, no matter how you move the vehicle or drive, the alarm will not sound because the "4" pin of U1B is always kept at a low level.

## Pack list:

| COMPONENTS                 | QUANTITY  | REFERENCE          |
|----------------------------|-----------|--------------------|
| CD4081 IC                  | 1         | U1                 |
| 9013 Transistor            | 3         | VT1, VT2, VT3      |
| 8050 Transistor            | 1         | VT4                |
| 220uF Electronic Capacitor | 1         | C1                 |
| 1N4007 Diode               | 1         | VD5                |
| 1N4148 Diode               | 4         | VD1, VD2, VD3, VD4 |
| 1kΩ Resistor               | 2         | R8, R10            |
| 10kΩ Resistor              | 2         | R4, R7             |
| 22kΩ Resistor              | 5         | R1, R2, R5, R6, R9 |
| 330kΩ Resistor             | 1         | R3                 |
| Buzzer                     | 1         | B                  |
| Mercury Switch             | 1         | K                  |
| Self-Locking Switch        | 1         | S                  |
| Terminal Block 2 Way       | 1         | J1                 |
| PCB Circuit Board          | 1         | -                  |
| <b>TOTAL ITEM</b>          | <b>27</b> | <b>-</b>           |



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