

CAR STARTING ALARM
CODE 504

LEVEL 1

The car starting alarm circuit which can be connected to a horn or siren delays the in-out time at 10 seconds and sets time to refunction in minute. It can be applied with a motorcycle or a motorcar with 12 volts.

Technical specifications:

- power supply : 12VDC.
- consumption : 50mA.(working)
- delay power on : approximate 10 seconds
- delay off (adj.): approximate 10 seconds to 3 minutes
- PCB dimensions : 2.27 x 1.70 inches.

How to works:

When the circuit is connected to a 12 volts battery of car, C1 will discharge the current approximately for 10 seconds passed on VR1, R4 and R5. Then VR1 is available for the adjustment of current sensitivity. Therefore since the car is started, the current of battery is lower resulting C1 to coupling the signal frequency to the pin 13 through R1. R4 at pin 13 of IC1/1 will increase the voltage throughout the pin 14 through R6 to pin 3 of IC1/2. At this stage pin 1 of IC1/2 is present with high voltage. The current will flow passed on R8 and D2 to the pin 3 in order to result pin 1 to remain high voltage. LED lights to show that the circuit has already checked. Then C4 discharges the current through D3 and R10 in 10 seconds. Therefore the voltage at pin 10 is higher than pin 9 so pin 8 is present with high current passed on R15 into the base of TR1 to result the relay to function. After the relay contacts the contact face for 10 seconds, LED will be unlighted. If the alarm device is connected to the circuit, it will function. TR1 is shorted the voltage at pin 9 of IC1/3 is lower. C4 discharges the voltage throughout R9 in a minute. The voltage at C4 connected to pin 10 of IC1/3 is lower than pin 9. Then pin 8 does not distribute the current so TR1 stop functioning as well as the relay release the contact face. After that IC1/4, R16 and C5 function to stop checking operation. To prevent the repeated work, the circuit will function after the delay release the contact face for 5 seconds.

PCB assembly:

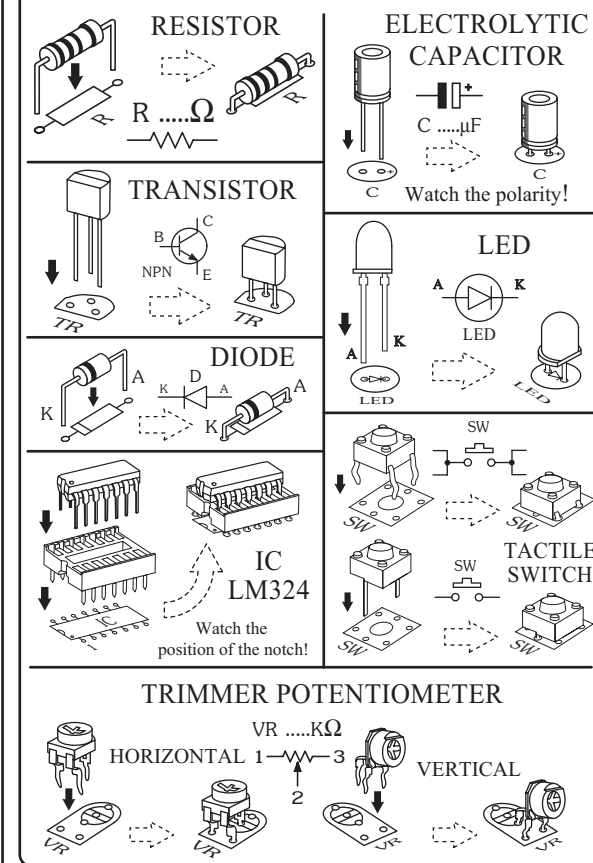
Shown in Figure 3 is the assembled PCB. Starting with the lowest height components first, taking care not to short any tracks or touch the edge connector with solder. Some tracks run under components, and care should be taken not to short out these tracks. All components with axial leads should be

carefully bent to fit the position on the PCB and then soldered into place. Make sure that the electrolytic capacitors are inserted the correct way around. The LED has a flat spot on the body which lines up with the line on the overlay. Now check that you really did mount them all the right way round!

Testing:

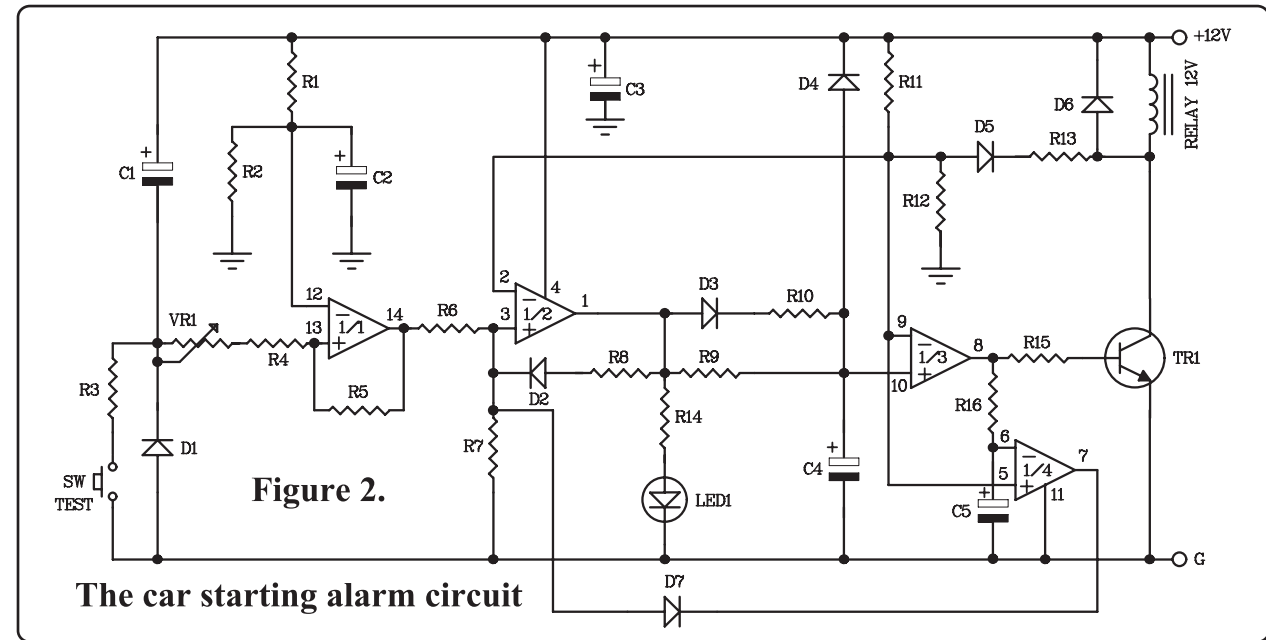
Giving power supply 12 volts to the circuit. At first do not connect "OUT" point so LED is unlighted. After 15 seconds, press SW TEST switch resulting LED to light for 10 to 185 seconds. Then LED is unlighted as well as the relay start working for a minute. The VR is available for adjustment of current sensitivity. The circuit have to be connected to the hidden switch. When going to go out the car, turn on the switch and get out within 10 seconds otherwise the circuit will function when opening the door.

Figure 1. Installing the componants

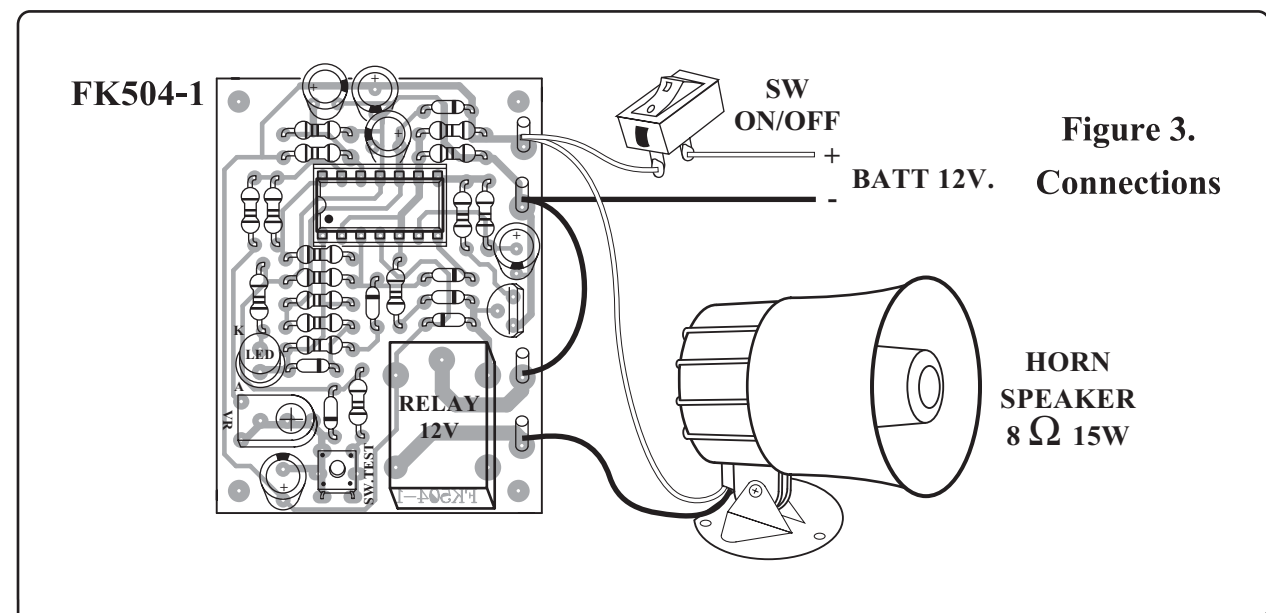


Troubleshooting:

The most problem like the fault soldering. Check all the soldering joint suspicious. If you discover the short track or the short soldering joint, re-solder at that point and check other the soldering joint. Check the position of all component on the PCB. See that there are no components missing or inserted in the wrong places. Make sure that all the polarised components have been soldered the right way round.



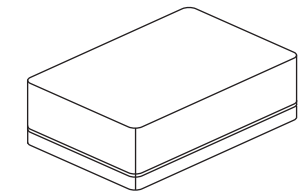
The car starting alarm circuit



FK504-1

Figure 3. Connections

HORN SPEAKER
8 Ω 15W



NOTE:

FUTURE BOX FB03 is suitable for this kit.

NEW KIT SET

CODE FK	DESCRIPTION	POWER
167	FIREFLY LIGHT (NIGHT ACTIVATE)	3VDC.
275	THREE TRAIN SOUNDS (IC DIGITAL)	3VDC.
276	OWL VOICE (IC DIGITAL)	3VDC.
326	DUAL STATION INTERCOM&DOOR BELL (WITH 2 SPEAKER)	6-12VDC.
436	UHF REMOTE CONTROL 1 CH.	TX. 9VDC. RX. 12VDC.
673	MINI POWER AMP 1+1W. STEREO	3-12VDC.