

TOUCH SWITCH (ON/OFF)
CODE 405

LEVEL 1

Touch switch (on-off) circuit can be switched on or off according to our requirement.

Technical specifications:

- power supply: 12VDC.
- consumption: 45mA. max.
- maximum load: 10A@125VAC and 5A@220VAC
- PCB dimensions : 3.17 x 1.56 inches.

How to works:

Connecting TR3 and TR4 as flip-flop circuit. When first giving supply, TR3 will conduct current while TR4 does not. When touching T sensor, TR1 and TR2 will conduct current and flip-flop will change its status. TR4 conducts current, LED displays, relay works and TR3 does not conduct current. If touching T sensor again, TR1 and TR2 will work by changing TR3 to work but TR4 does not, LED and relay stop working. Touching switch is working by connecting J together. Whenever do not touching T sensor, TR3 conduces current to short at the base of TR3 to ground, TR3 then stop conducting current, the collector of TR3 now has high voltage, so TR4 instead conduct current, LED displays and relay works. When we pressing switch off, the base of TR3 is not shorted to ground, TR3 conduct shorted current at the collector to ground, so that TR4 will stop conducting current, LED and relay are also stop working.

PCB assembly:

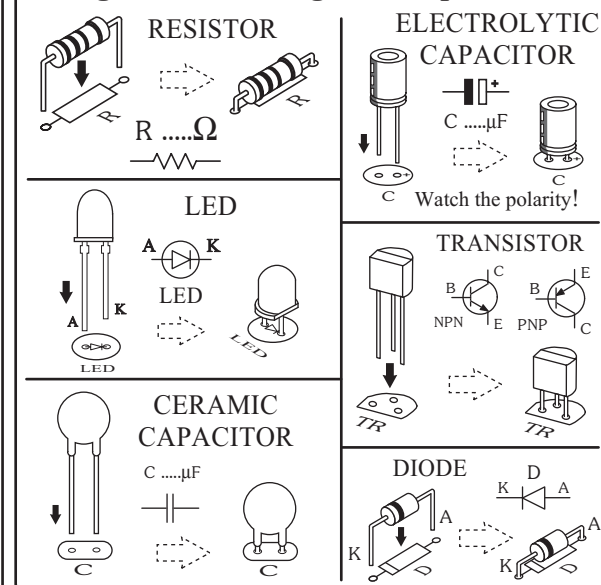
Shown in Figure 3 is the assembled PCB. Starting with the lowest height components first, taking care not to short any tracks or touch the edge connector with solder. Some tracks run under components, and care should be taken not to short out these tracks. If the pins will not enter the holes with ease, use a small drill to slightly enlarge the opening. 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. Some components are particularly sensitive to heat (ie: Transistors, IC's, diodes etc.) extra care must be taken to

only apply the iron for as little time as possible, using a pair of pliers to grip the leads will help conduct heat away. Trim components leads with wire cutters to prevent excess lengths causing a short circuit. Now check that you really did mount them all the right way round!

Testing:

Do not connecting J to each other. Connect the power supply 12VDC to circuit. Touching T sensor 1 time, LED displays and relay works. Taking supply off and connecting J together. Connect power supply again. Now LED does not display. Touching T sensor, LED and relay is start working and will stop when touching T sensor again. Selecting desired function types, if requires 1 touch start and 1 touch stop, do not connecting J together. If requires touching switch on and untouched for switch off, connecting J together.

Figure 1. Installing the components



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.

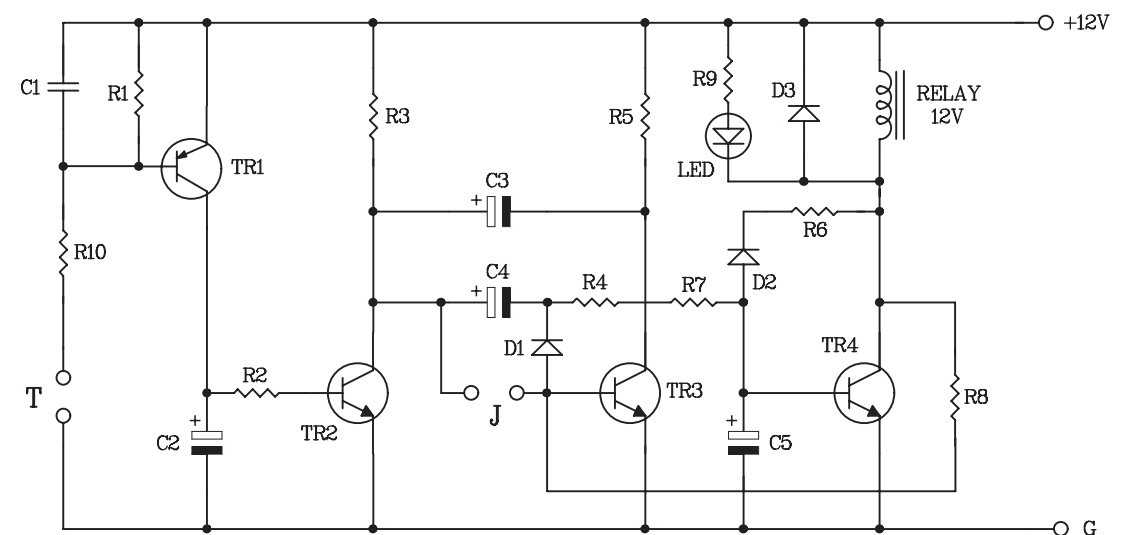


Figure 2. The touch switch (on-off) circuit

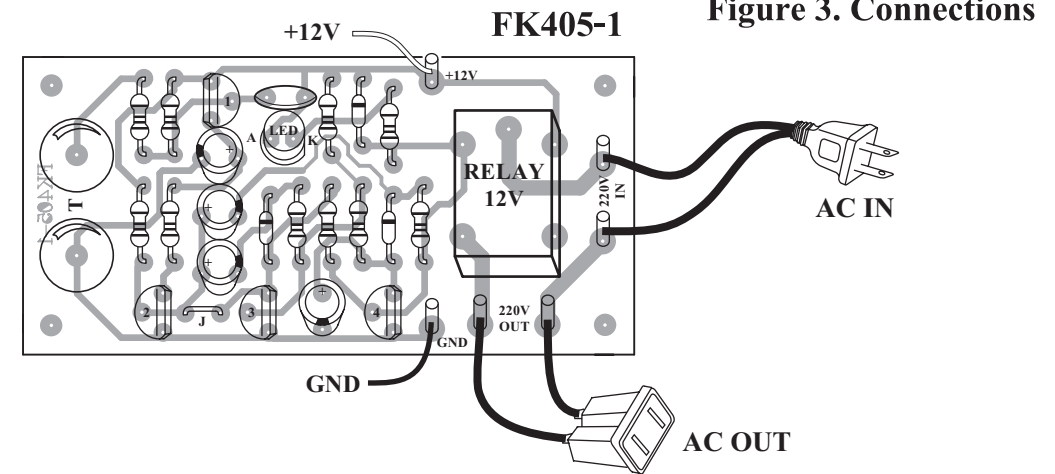
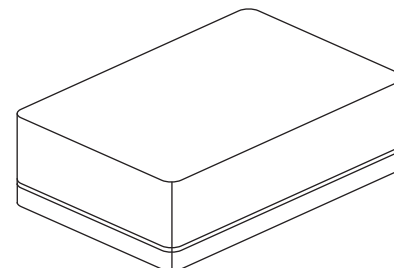


Figure 3. Connections



NOTE:
FUTURE BOX FB04 is suitable for this kit.

NEW KIT SET

CODE FK	DESCRIPTION	POWER
161	FEELING FLASHER 14 LED	9-12VDC
162	SATURN'S RING FLASHER 31 LED	9-12VDC
163	UNIVERSAL FLASHER 10 LED	9VDC
164	XENON TUBE FLASHER (STRAIGHT TYPE)	220VAC
165	SOUND ACTIVATED XENON FLASHER (STRAIGHT TYPE)	220VAC
166	LIGHT ACTIVATED XENON FLASHER (STRAIGHT TYPE)	220VAC