MUSIC-ON HOLD FOR TELEPHONE CODE 308

LEVEL 1

This circuit is easy to use. When hold the telephone line, there is the music in the telephone line. It can be used the local line and the telephone exchange.

Technical specifications:

- no need power supply.

- PCB dimensions : 1.88 x 1.63 inches.

How to works:

When you don't push the switch SW, the circuit isn't working and LED isn't lighted on. But if picked-up the handset and push the switch SW, causing TR1, TR2 is working and LED is lighted on. IC1 is created the music and send this signal to the base of TR4 through R11 for amplify the music before send the music to the telephone line. At this time, you will hear the music at the handset. When you release the switch SW, TR1, TR2, IC1 and TR1 is working continue because at the base of TR1 is bias through R1 and D2. But if you picked-down the handset, the voltage at the telephone line is higher, causing TR2 is working and short the voltage of C1 to ground. TR1 will be stoped working but TR3, LED, IC1 and TR4 is holded working. The music is stilled in the line. When picked-up the handset again, the voltage in the line is lower, causing TR2, TR3, LED, IC1 and TR4 are stoping and the music in the line is stop.

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!
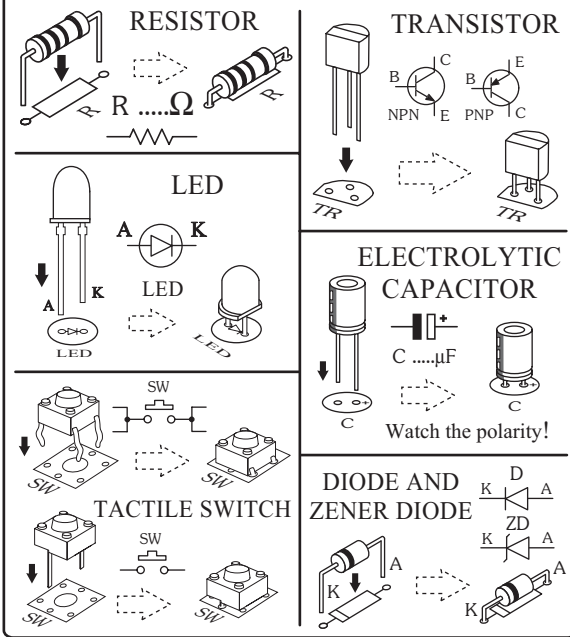
Testing:

Connect the telephone line to the telephone with connecting the positive pole of the telephone line to "+TEL IN" on PC-board and the negative pole of the telephone line to "-TEL IN". Picked-up the handset, pushing the switch SW and LED is lighted on. You will hear the music at the handset. Picked-down the handset, LED will be holded the light on. Picked-up the handset again LED will be lighted off.

Using:

When you want to hold the line, push the switch SW and picked-down the handset. The circuit will be working continue. When you hold the line, you will hear the music at the handset.
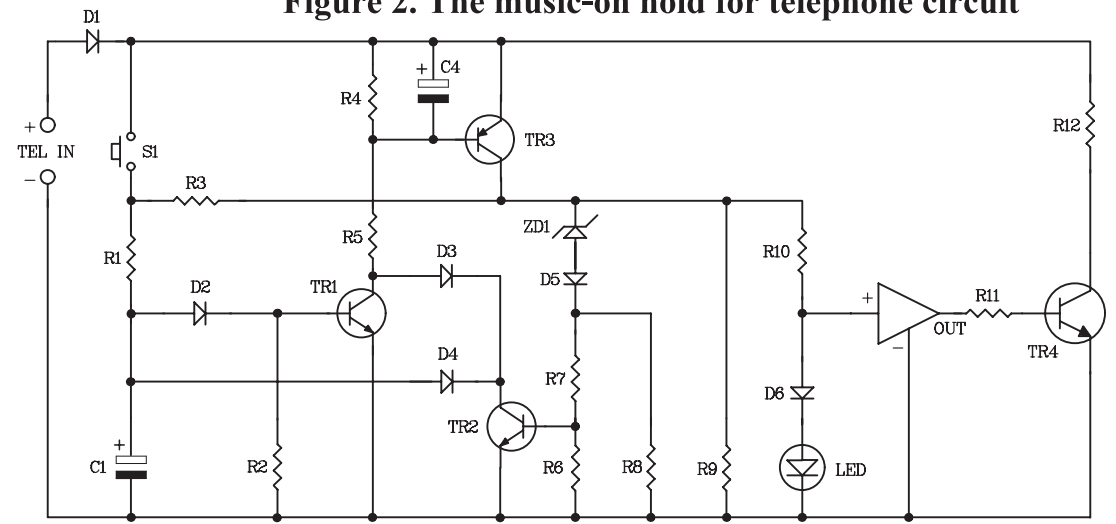
Figure 1. Installing the componants

RESISTOR

$R ..... \Omega$

TRANSISTOR

LED

ELECTROLYTIC CAPACITOR

$C ..... \mu F$

Watch the polarity!
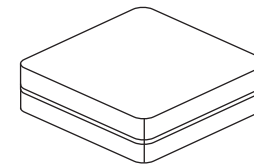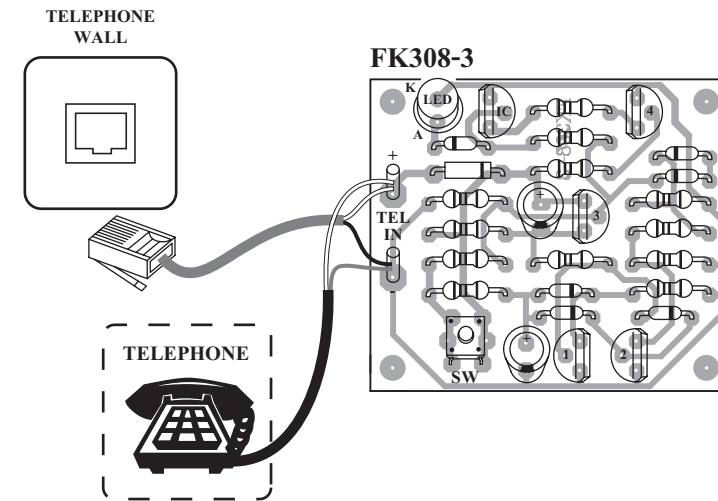
TACTILE SWITCH

DIODE AND ZENER DIODE

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 music-on hold for telephone circuit

Figure 3. Connections

TELEPHONE WALL

FK308-3

TELEPHONE

NOTE:

FUTURE BOX FB01 is suitable for this kit.

NEW KIT SET *NEW*

CODE FK	DESCRIPTION	POWER
168	NO SMOKING FLASHER 46 LED	9-12VDC.
169	DANCING ROBOT FLASHER 33 LED	9-12VDC.
170	DANGER FLASHER 42 LED	9-12VDC.
171	TWO LAMP FLASHER	3VDC.
172	THREE STEP FLASHER 19 LED	9-12VDC.
173	HALLOWEEN PUMPKIN FLASHER 23 LED	9-12VDC.
174	ANIMATED LED SIGNBOARD (5x7 DOT MATRIX)	3-5VDC.
816	VARIABLE REGULATOR 0-50V. 3A.	50VDC.
817	TRANSFORMERLESS POWER SUPPLY 6-9-12V 50mA	220-240VAC.