

MINI ORGAN 13 TONE
CODE 274

LEVEL 1

This mini organ circuit can generate 13 different tones by pushing switch A to switch M, switch A produces the lowest frequency and switch M produces the highest.

Technical specifications:

- power supply: 9VDC.
- consumption: 75mA max. (working), 5mA (stand by)
- there are 13 different tones.
- dimensions: 4.18 x 1.21 inches

How to works:

IC1 555 timer is used here as a frequency generator. R1 to R13 acts as the frequency adjustment for each tone. The circuit can be connected to any type of speaker but best suited to the included 2 inches 8 ohm 0.25 watts speaker.

PCB assembly:

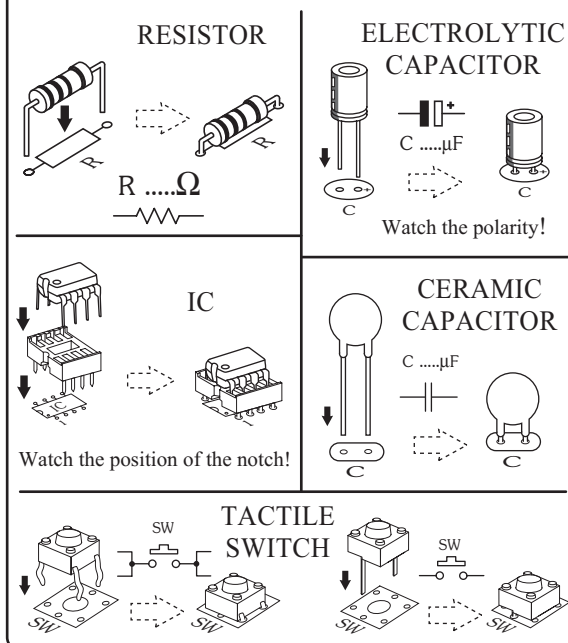
Shown in Figure 3 is the assembled PCB. Starting with the lowest height components first, taking care not to short any tracks or touch the edge connector with solder. Some tracks run under components, and care should be taken not to short out these tracks. All components with axial leads should be carefully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

This kit has an operating voltage range of 9 VDC. Apply power supply. Push switch A to M you will hear

the tone from the loudspeaker which have 13 different tones follow pushing each switch.

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.

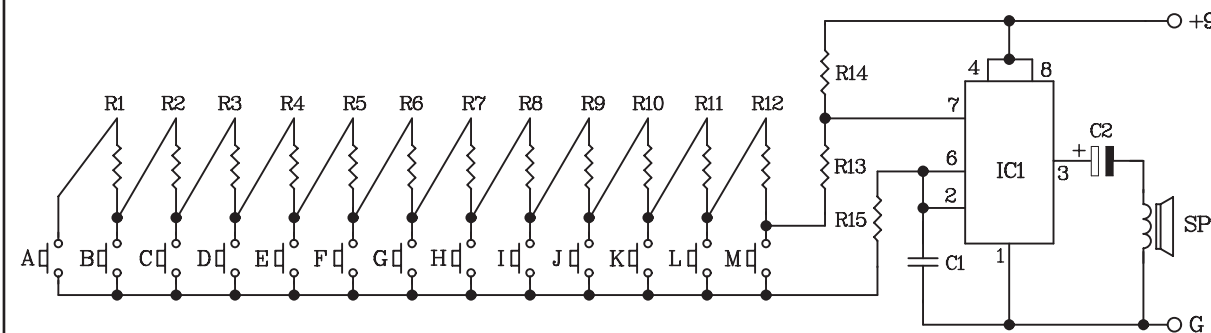


Figure 2. The mini organ 13 tone circuit

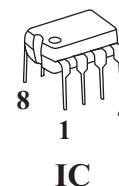
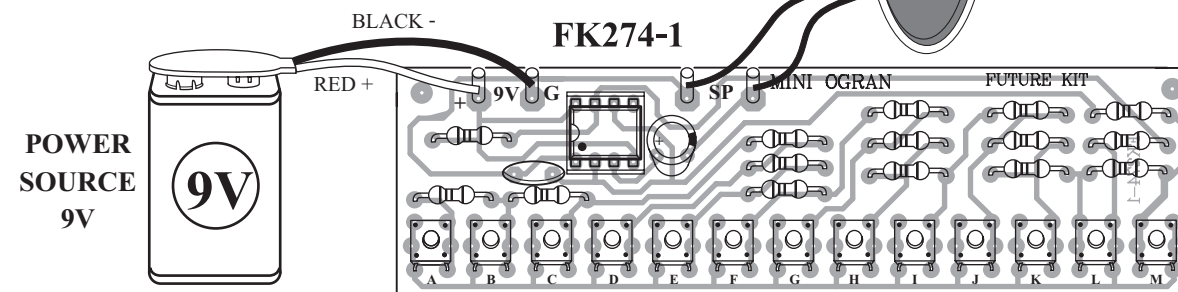
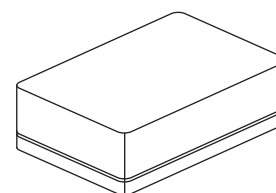


Figure 3. Connections



SPEAKER
8 Ω 0.25W



NOTE:
FUTURE BOX FB05
is suitable for this kit.

NEW KIT SET

CODE FK	DESCRIPTION	POWER
156	MINI TRAFFIC LIGHT 3 LED	9-12VDC
157	TWO WAY CHASING LIGHT TWO COLOUR 10 LED	9-12VDC
158	STROBOSCOPE 220V	220VAC
159	SHAKING DICE	9-12VDC
160	RANDOM NUMBER GAME 1 DIGIT	9-12VDC
273	MUSIC DOOR (WITH MAGNETIC SWITCH)	3VDC
274	MINI ORGAN 13 TONE (WITH MAGNETIC SWITCH)	9VDC
325	RINGING SIGNAL LIGHT 5 LED	NONE
672	MINI MEGAPHONE (WITH SPEAKER)	4.5-12VDC