

TELEPHONE RECORDING ADAPTER
CODE 301 **LEVEL 1**

This telephone recording adaptor circuit. It is automatically records whenever phone is picked up. It can be applied for every telephone model. It can be used to PABX system.

Technical specifications:

- power supply: 12VDC. max. 300mA.
- consumption: 15mA max.
- PCB dimensions : 2.22 x 1.47 inches.

How to works:

Under normal condition that telephone is hanged up, TEL line has the voltage 48 volts, so ZD1 does conduct current while TR1 does conduct current, the voltage at the collector at TR1 is shorted to ground. TR2 and TR3 do not conduct current and relay does not work. Connected recorder does not work accordingly and LED does not display. But when the telephone is picked up, TEL has the voltage 6 volts, TR1 does not conduct current, the collector of TR1 has high voltage instead, so TR2 and TR3 including relay and LED are working and tape recorder starts recording. C1 is coupling sound signal to cassette tape. D6-D9 prevent ringing sound while C2 prevents circuit working when there is another telephone call.

PCB assembly:

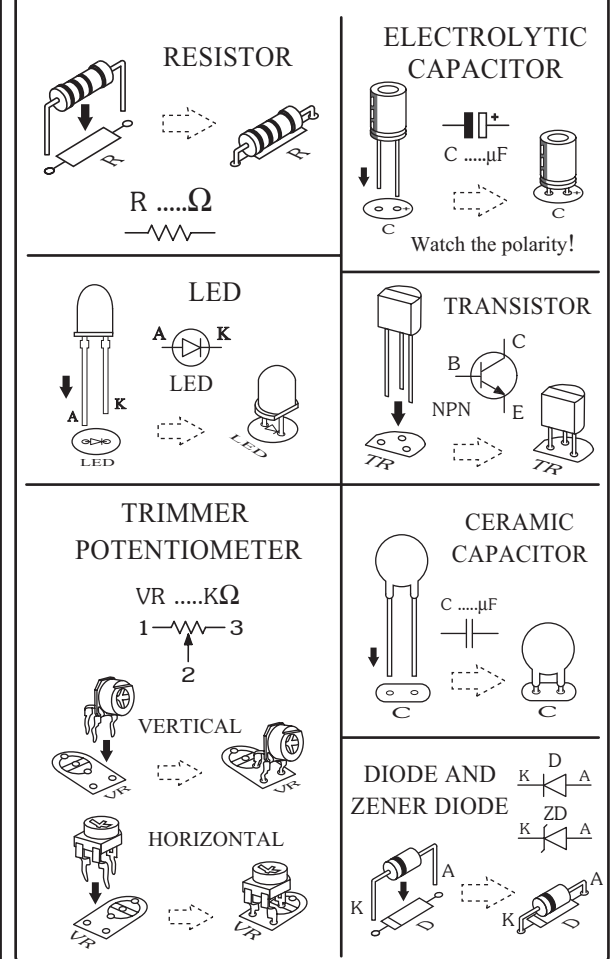
Shown in Figure 3 is the assembled PCB. Starting with the lowest height components first, taking care not to short any tracks or touch the edge connector with solder. Some tracks run under components, and care should be taken not to short out these tracks. All components with axial leads should be carefully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

Connect the power supply 12VDC to circuit. With the positive pole is connected to "+12V" point and the negative pole is connected to "G" point. LED does not

display. Connecting telephone line with TEL. Picking phone up, LED will display and relay works. Hanging on the telephone and connect the circuit as per figure. Pressing recording button of tape recorder. When connection is completely done, LED does not display and tape recorder does not work yet. Speaking to the phone for half minute then hanging on, rewinding cassette tape and listening the recorded sound. This circuit can record sound of both transmitter and receiver.

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.

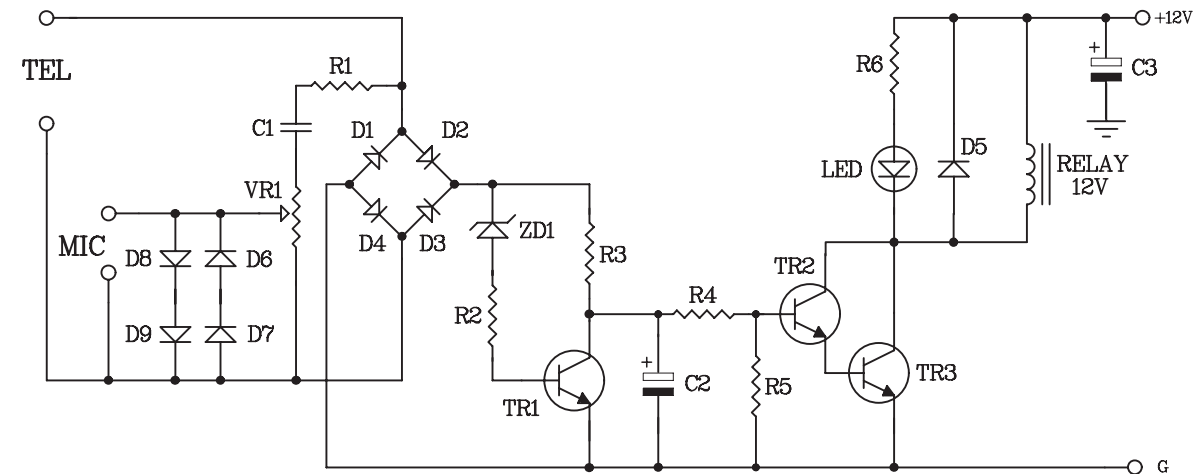


Figure 2. The telephone recording adaptor circuit

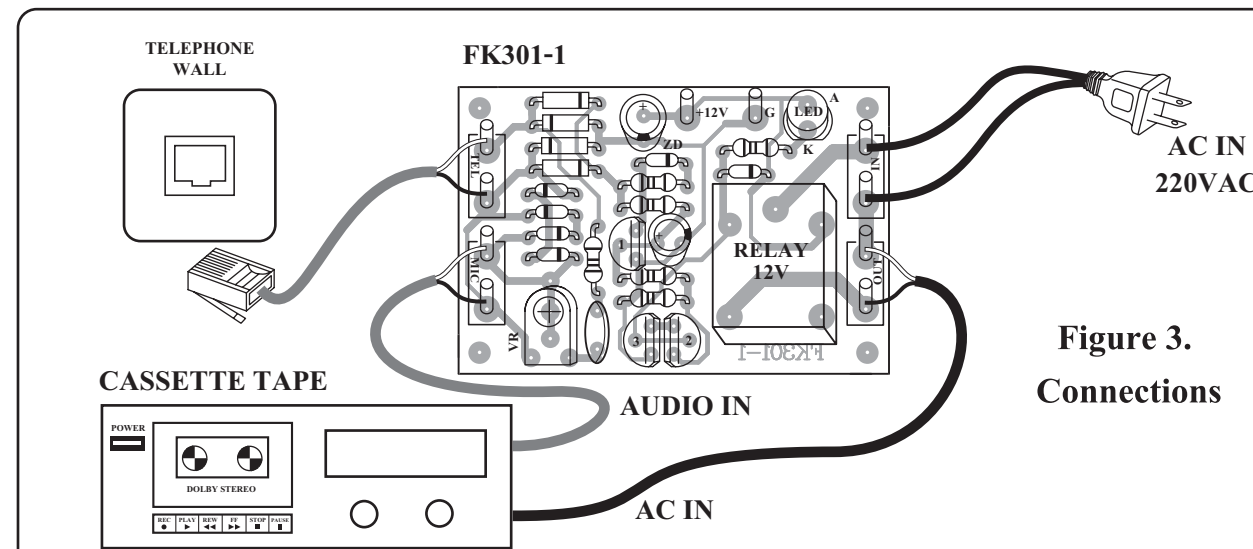
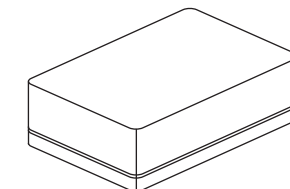
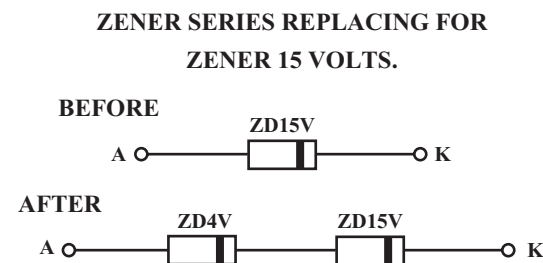


Figure 3. Connections

In case of there is voltage across telephone circuit for over 14 volts, connecting zener diode 4 volts by series type with zener diode 15 volts as per below figure and replacing for zener diode 15 volts.



NOTE:
FUTURE BOX FB03 is suitable for this kit.