

IN CIRCUIT T.R. CHECKER CODE 907

The in circuit TR checker device can examine both NPN and PNP TR to check that whether it is practical or not.

- **Technical specifications:**
- power supply : 9VDC.
- consumption : 85mA max.
- PCB dimensions : 2.57 x 1.21 inches.

How to works:

TR1 and TR2 are connected to generate a low square frequency. The frequency is transmitted to TR3 to be amplified. Supposing TR3 function, TR4 will work and LED1 will light but LED2 will be unlighted. At the second step, TR3 stop distribution resulting TR5 to work and LED2 to light but LED1 be unlighted. Finally, TR3 returns to function. Therefore LED1 and LED2 blink, be lighted and unlighted alternatively. LED1 is PNP LED and LED2 is NPN LED.

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:** Connecting the power supply 9 volts into the circuit. LED1 and LED2 blink, be lighted and unlight alternatively. Connect the transistor to the "B, C, E" points accurately. *** NPN LED blinks and PNP LED is unlighted, this indicates that TR is NPN and practical. *** PNP LED blinks and NPN is unlighted, this proves that TR is PNP and practical. *** Both PNP and NPN LED blink, be unlighted or light, this indicates that TR is unpractical. Figure 1. Installing the componants ELECTROLYTIC RESISTOR CAPACITOR ..Ω R .. Watch the polarity! DIODE D TRANSISTOR LED LED **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.

