

Digital IC Tester

Abstract

Different ICs come with different specifications. Thus, it becomes imperative to apply different hardware configurations and feed all possible inputs for checking different ICs. We need some easy and useful techniques to check the functionality of different kinds of ICs. The digital IC tester is implemented by using the Arduino controller board. The processing of the inputs and outputs is done by the microcontroller. The display part on the microcontroller board is modeled using LCD. After the successful testing of the IC, the result is displayed on the LCD.

This IC tester is highly capable, highly reliable as well as highly capable. The basic function of the digital IC tester is to test a digital IC for correct logical functioning as described in the truth table and/or function table. It can test digital ICs having a maximum of 24 pins. Since it is programmable, any number of ICs can be tested within the constraint of the memory available. This model applies the necessary signals to the inputs of the IC, monitoring the outputs at each stage and comparing them with the outputs in the truth table. Any discrepancy in the functioning of the IC results in a fail indication, displays the faulty and good gates on the LCD. The testing procedure is accomplished with the help of keys present on the main board.

