

Experiment # 3

Serial to parallel converter

1- Introduction:

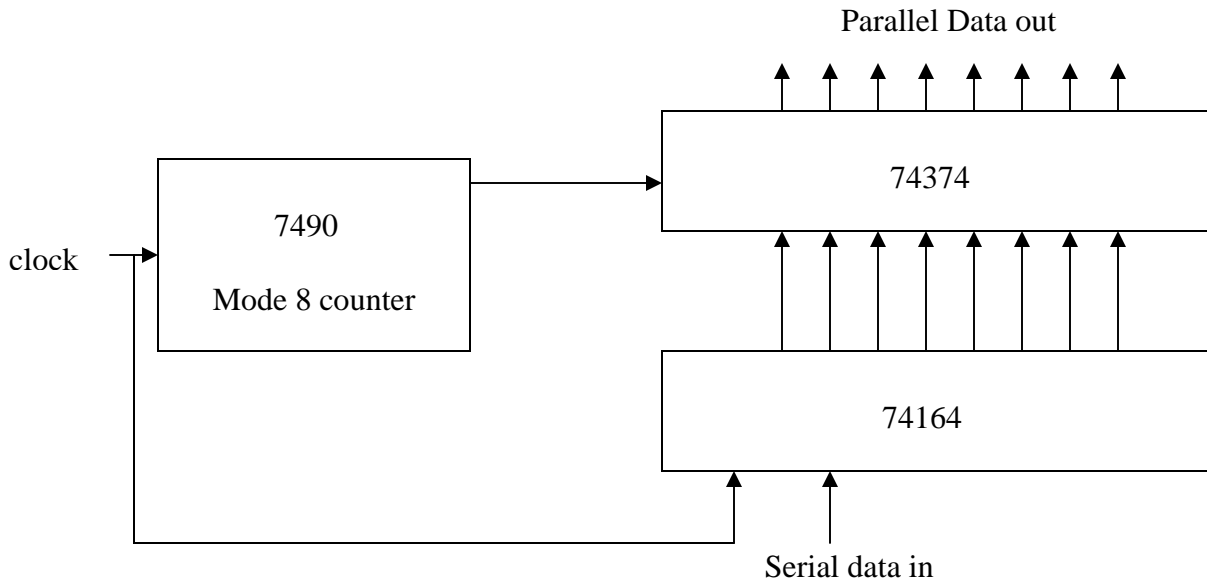
This is a simple method to convert a serial data that have been entered to the circuit into parallel one. The reverse parallel to serial can be done in a similar manner. In fact, the first one is useful in computer systems architecture. For example, in ALUs, data can be entered serially and the input, for ALU operations, can be applied in parallel.

2- Equipment:

Type of IC	description
74164	8 bits serial to parallel Shift registers
74374	Octal D-flip-flop
7490	Decade Counter

3- Procedure:

- The function diagram is following :



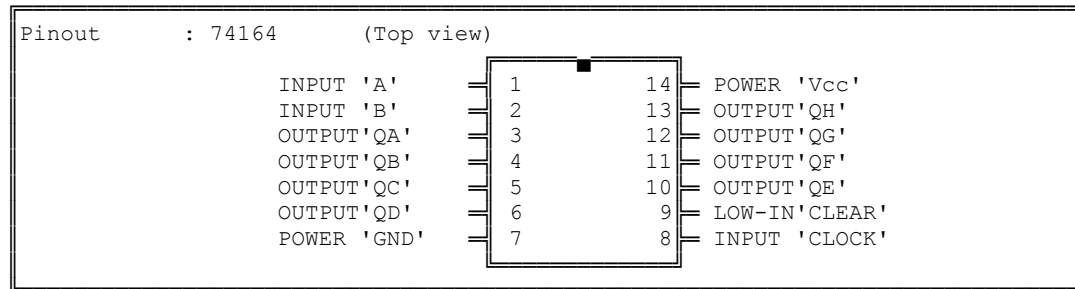
- Derive the wiring diagram.
- Connect the circuit given by the function diagram according to the derived wiring diagram.
- Check if the circuit works properly.

4- Conclusions:

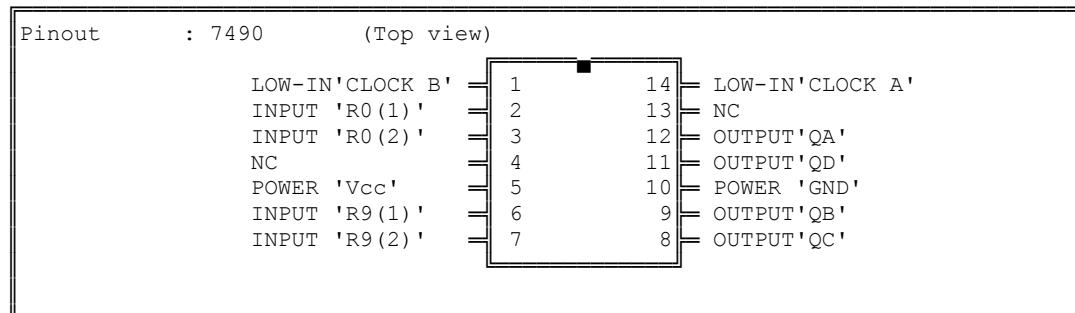
Write your conclusions about the experiment.

5- Pin-out for ICs:

Function: 8 bits serial to parallel Shift registers



Function: Decade Counter



Function: Octal D Flip-Flop

