

1995 Paper 2 Question 22

Digital Electronics and Computer Design

A sequential circuit has been built, and it behaves slightly erratically. When switched on it produces on its three output wires one of the following patterns:

000		010
011	←	101
110		111
100		010
001		
000		

or

The second pattern is not intended to arise. Deduce the circuit details and propose a modification that ensures that in due course the circuit will always settle into the cycle shown in the first pattern.

[20 marks]