

The diagram illustrates a logic circuit for a 3-bit binary counter. It features eight input comparators labeled Zero through Seven, each with a green input line and a green output line. The Zero input is not connected to anything. The One, Two, and Three inputs are connected to the LSB (Least Significant Bit) OR gate. The Four, Five, and Six inputs are connected to the MSB (Most Significant Bit) OR gate. The Seven input is not connected. The outputs of the OR gates are labeled 0_F and 1_F. The Zero input is circled in pink.

The encoder converts decimal representation of numbers, into binary. It does this by using OR gates. Think about how you count in binary, 1 in binary is 001, two is 010, three is 011. Thats how you want to connect the inputs to the gates. The three input connect to the LSB OR gate, and the middle OR gate, and so on. An encoder takes 2^n inputs and returns n inputs. There is also a 2^2 bit encoder in the folder as well.

8x3 encoder truth table

[illegible]