

The JETS Challenge

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Challenge 66 – The Binary Code Challenge

Problem:

Binary coding (1=ON and 0=OFF) is used to light scoreboard numbers using a pattern of lights in numbered sites as shown below. There are four circuits (A,B,C and D) with four bulbs in each (numbered 0, 1,2 and 3) Each group of four binary (on/off) values can be grouped into a single hexadecimal value as shown in the table. For Example 1, a crude figure “3” would have all three horizontal lines (Circuits A, B, and C) lit up, so those values would all be “F” (representing 1111). For the “D” circuit, only bulbs D1 and D3 would be lit, or in hexadecimal 0101 = 5 (see Example 1) So all four circuits could be written as A.B.C.D = F.F.F.5 Perhaps a better appearing 3 would be example 2, which would be coded Circuit A = E (1110), Circuit B = 6 (0110), Circuit C = E (1110) and Circuit D = 5 (0101). So all four circuits could be written as A.B.C.D = E.6.E.5. The third example would be coded Circuit A = 6 (0110), Circuit B = 2 (0010), Circuit C = 6 (0110) and Circuit D = F (1111). So all four circuits could be written as A.B.C.D = 6.2.6.F

Example 1	Example 2	Example 3
XXXX X XXXX X XXXX	XXX0 000X 0XX0 000X XXX0	0XX0 X00X 00X0 X00X 0XX0

	BI = HEX	BI = HEX	BI = HEX	BI = HEX
A0 A1 A2 A3	0000 = 0	0100 = 4	1000 = 8	1100 = C
D0 D1	0001 = 1	0101 = 5	1001 = 9	1101 = D
B0 B1 B2 B3	0010 = 2	0110 = 6	1010 = A	1110 = E
D2 D3	0011 = 3	0111 = 7	1011 = B	1111 = F
C0 C1 C2 C3				

A.B.C.D - A.B.C.D - A.B.C.D, etc

F.9.F.F – F.1.1.5 / F.9.F.F – 9.F.1.5 / 1.1.1.5 – F.1.1.5 – F.1.1.5 – F.F.F.B

What happened on the coded date (M-M / D-D / Y-Y-Y-Y) above?

Solution:

Answer = 07/04/1776 America declared independence.