$X_2 X_1 X_0$	$X_2' X_1' X_0'$	$J_2 K_2$	$J_1 K_1$	$J_0 K_0$
0 0 0	0 1 1	0 X	1 X	1 X
0 0 1	1 0 0	1 X	0 X	X 1
0 1 0	1 0 1	1 X	X 1	1 X
0 1 1	1 1 0	1 X	X 0	X 1
1 0 0	1 1 1	X 0	1 X	1 X
1 0 1	0 0 0	X 1	0 X	X 1
1 1 0	0 0 1	X 1	X 1	1 X
1 1 1	0 1 0	X 1	X 0	X 1

X	X'	JK
0 → 0		0 X
0 → 1		1 X
1 → 0		X 1
1 → 1		X 0

جدول خصائص قلاب

JK

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$$J_2$$

$$J_2 = X_0 + X_1$$

$$K_2 = X_0 + X_1 = J_2$$

$$J_1 = X_0'$$

$$K_1 = X_0' = J_1$$

$$J_0 = 1 = K_0$$

X_2 X_1 X_0	X_2' X_1' X_0'	J_2k_2 J_1k_1 J_0k_0
0 0 0	1 0 1	1X 0X 1X
0 0 1	1 1 0	1X 1X X1
0 1 0	1 1 1	1X X0 1X
0 1 1	0 0 0	0X X1 X1
1 0 0	0 0 1	X1 0X 1X
1 0 1	0 1 0	X1 1X x1
1 1 0	0 1 1	X1 X0 1X
1 1 1	1 0 0	X0 X1 X1

K-map for J_2 (rows X_2, columns X_1X_0):

$X_2 \backslash X_1X_0$	00	01	11	10
	1 (0)	1 (1)	0 (3)	1 (2)
	X (4)	X (5)	X (7)	X (6)

K-map for K_2:

$X_2 \backslash X_1X_0$	00	01	11	10
	X (0)	X (1)	X (3)	X (2)
	1 (4)	1 (5)	0 (7)	1 (6)

K-map for J_1:

$X_2 \backslash X_1X_0$	00	01	11	10
	0	1	X	X
	0	1	X	X

K-map for K_1:

$X_2 \backslash X_1X_0$	00	01	11	10
	X	X	1	0
	X	X	1	0

$$J_2 = X_0' + X_1'$$

$$= NAND(X_0, X_1)$$

$$K_2 = X_0' + X_1' = J_2$$

$$J_1 = X_0$$

$$K_1 = X_0 = J_1$$

$$J_0 = K_0 = 1$$

ساده‌سازی نهایی با عمل آت :

$$k_2 = J_2 = (X_0 \oplus X') + (X_1 \oplus X')$$

$$k_1 = J_1 = X_0 \oplus X = J_1'$$

$$k_0 = J_0 = 1$$

$$\Rightarrow k_2 = J_2 = J_1'$$

پس این مدار با ۲ گیت نات ، ۲ XOR و یک OR

قابل ساخت است .