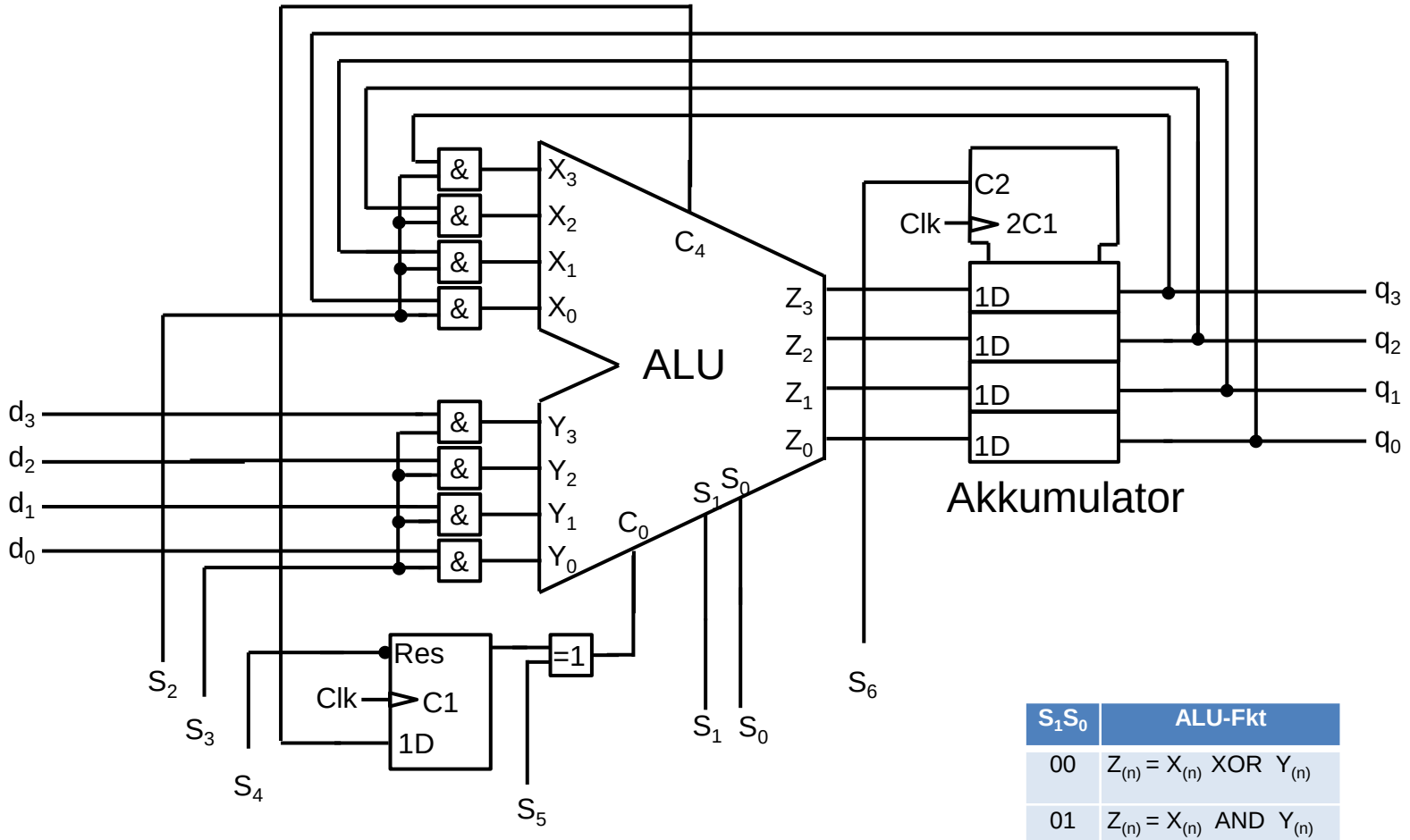
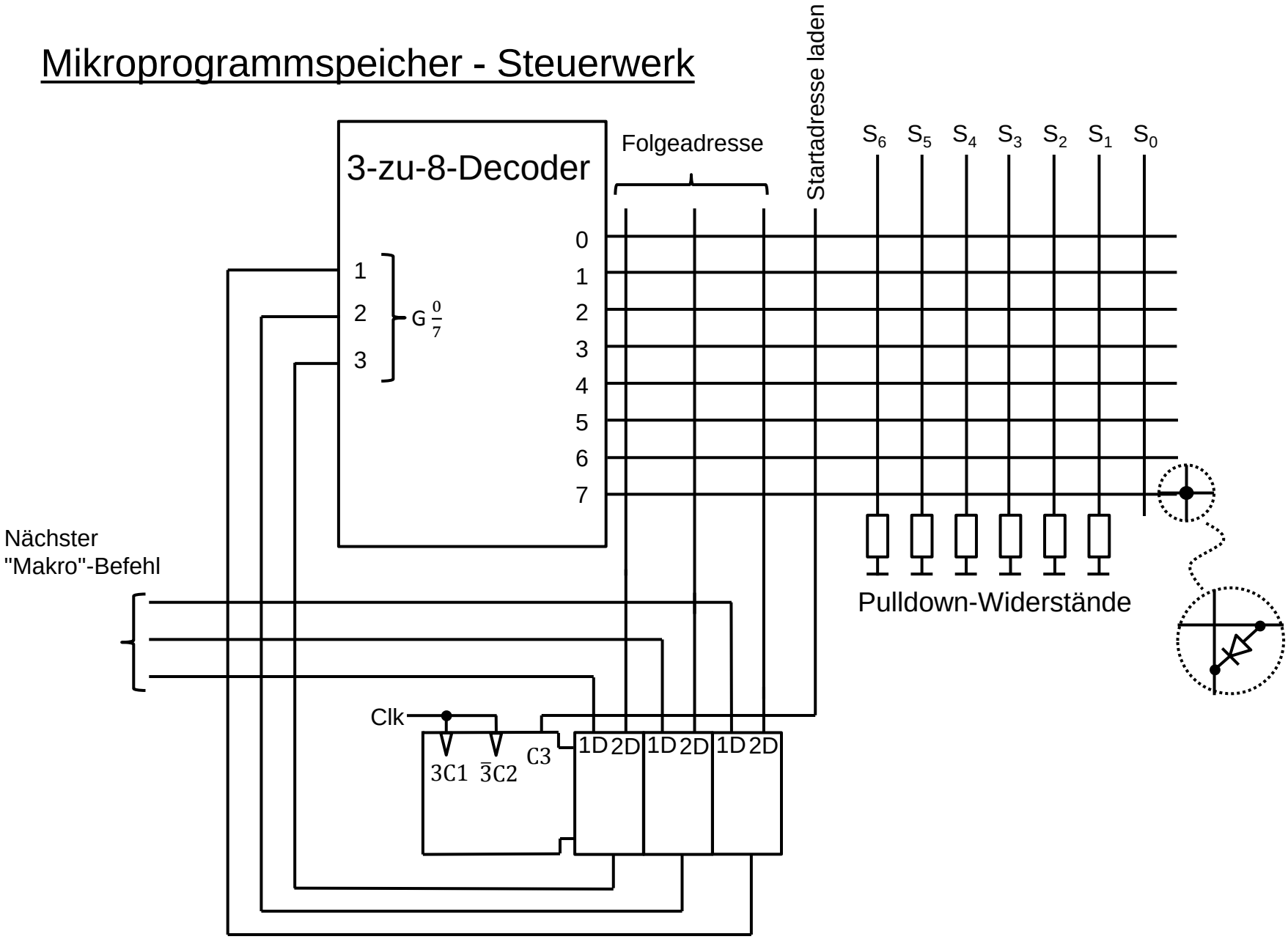
4-Bit-ALU mit Akkumulator und vereinfachtem Statusregister (nur Carry)

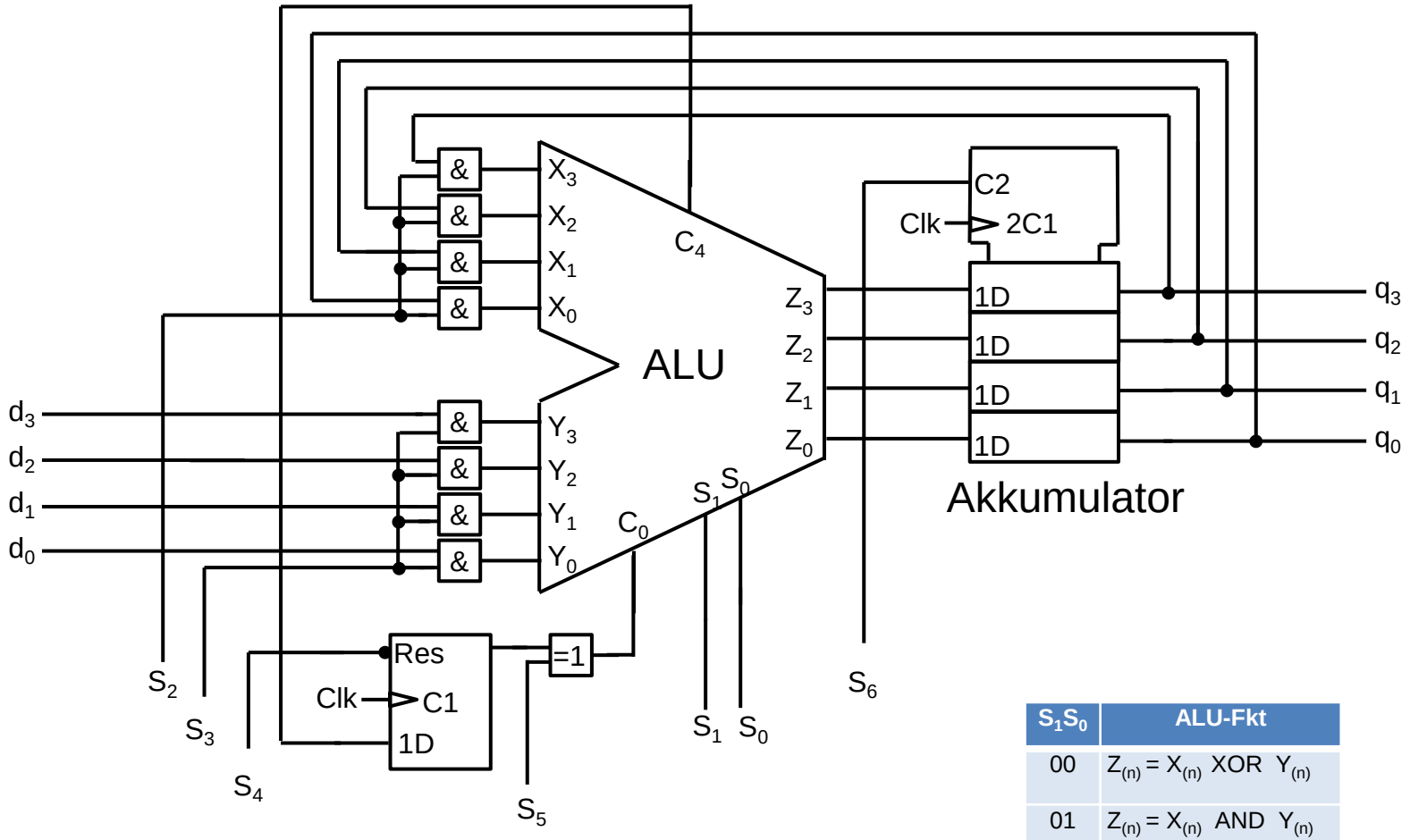


S_1S_0	ALU-Fkt
00	$Z_{(n)} = X_{(n)}$ XOR $Y_{(n)}$
01	$Z_{(n)} = X_{(n)}$ AND $Y_{(n)}$
10	$Z_{(n)} = X_{(n)}$ OR $Y_{(n)}$
11	$Z_{(n)} = X_{(n)}$ PLUS $Y_{(n)}$

Mikroprogrammspeicher - Steuerwerk



4-Bit-ALU mit Akkumulator und vereinfachtem Statusregister (nur Carry)

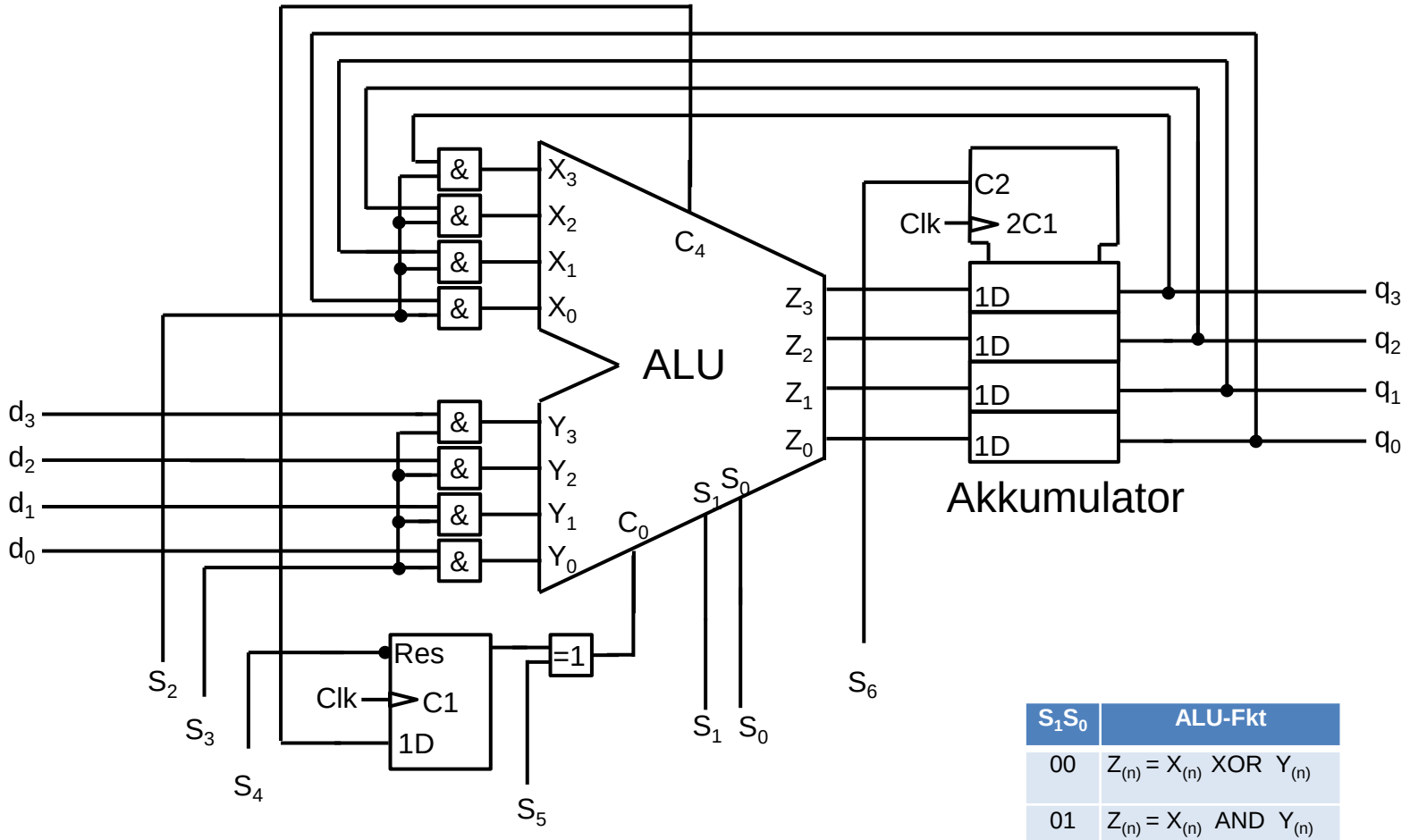


S_1S_0	ALU-Fkt
00	$Z_{(n)} = X_{(n)}$ XOR $Y_{(n)}$
01	$Z_{(n)} = X_{(n)}$ AND $Y_{(n)}$
10	$Z_{(n)} = X_{(n)}$ OR $Y_{(n)}$
11	$Z_{(n)} = X_{(n)}$ PLUS $Y_{(n)}$

Bsp.: "Inc A"

	S_6	S_5	S_4	S_3	S_2	S_1	S_0
Reset Carry	0	1	**0**	0	1	1	1
Add 1	**0**	**1**	**1**	**0**	**1**	**1**	**1**
Akku laden	1	1	1	0	0	1	1

4-Bit-ALU mit Akkumulator und vereinfachtem Statusregister (nur Carry)

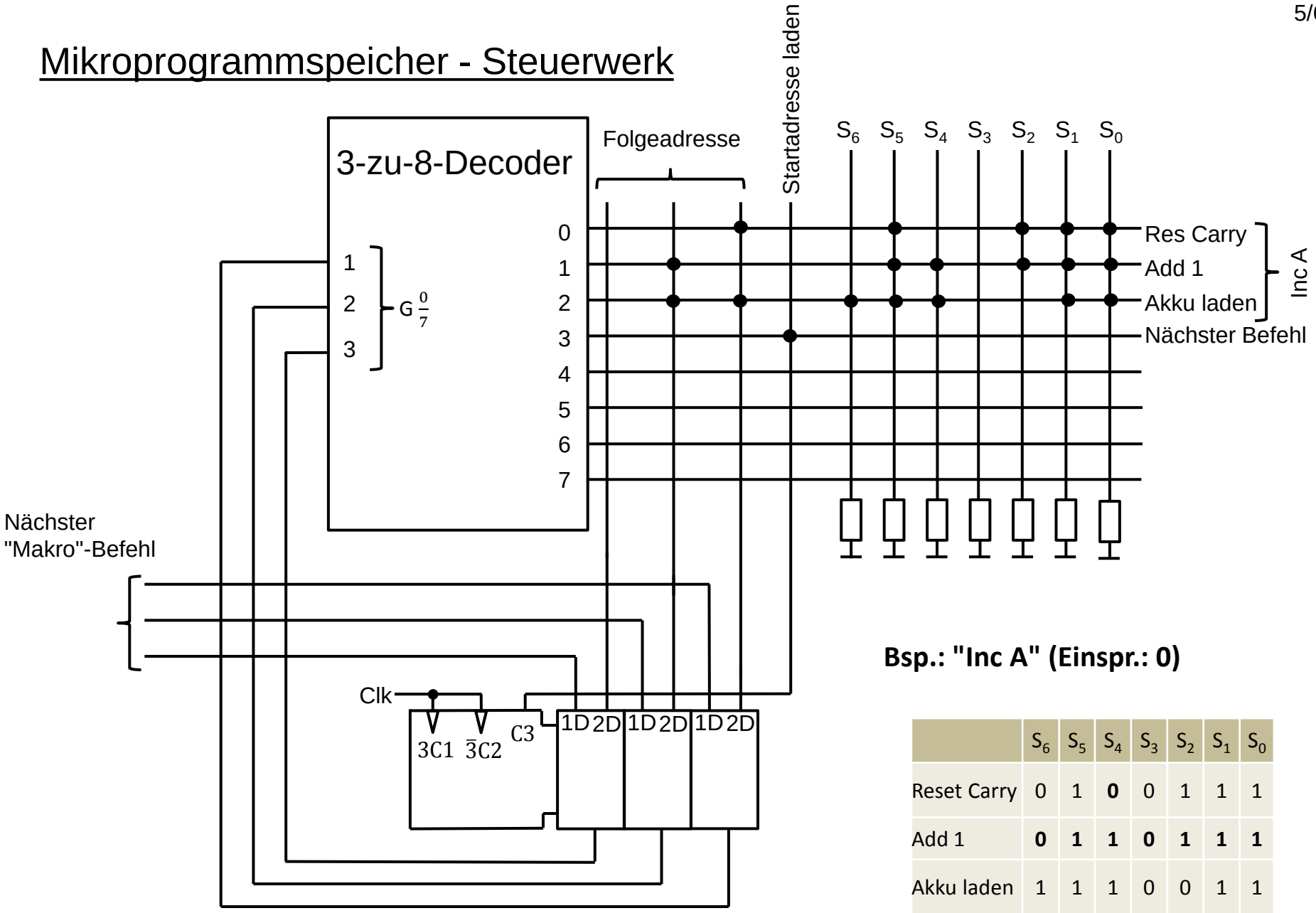


S_1S_0	ALU-Fkt
00	$Z_{(n)} = X_{(n)}$ XOR $Y_{(n)}$
01	$Z_{(n)} = X_{(n)}$ AND $Y_{(n)}$
10	$Z_{(n)} = X_{(n)}$ OR $Y_{(n)}$
11	$Z_{(n)} = X_{(n)}$ PLUS $Y_{(n)}$

Bsp.: "And A,d"

	S_6	S_5	S_4	S_3	S_2	S_1	S_0
And A,d	**0**	**0**	**1**	**1**	**1**	**0**	**1**
Akku laden	1	1	1	0	0	1	1

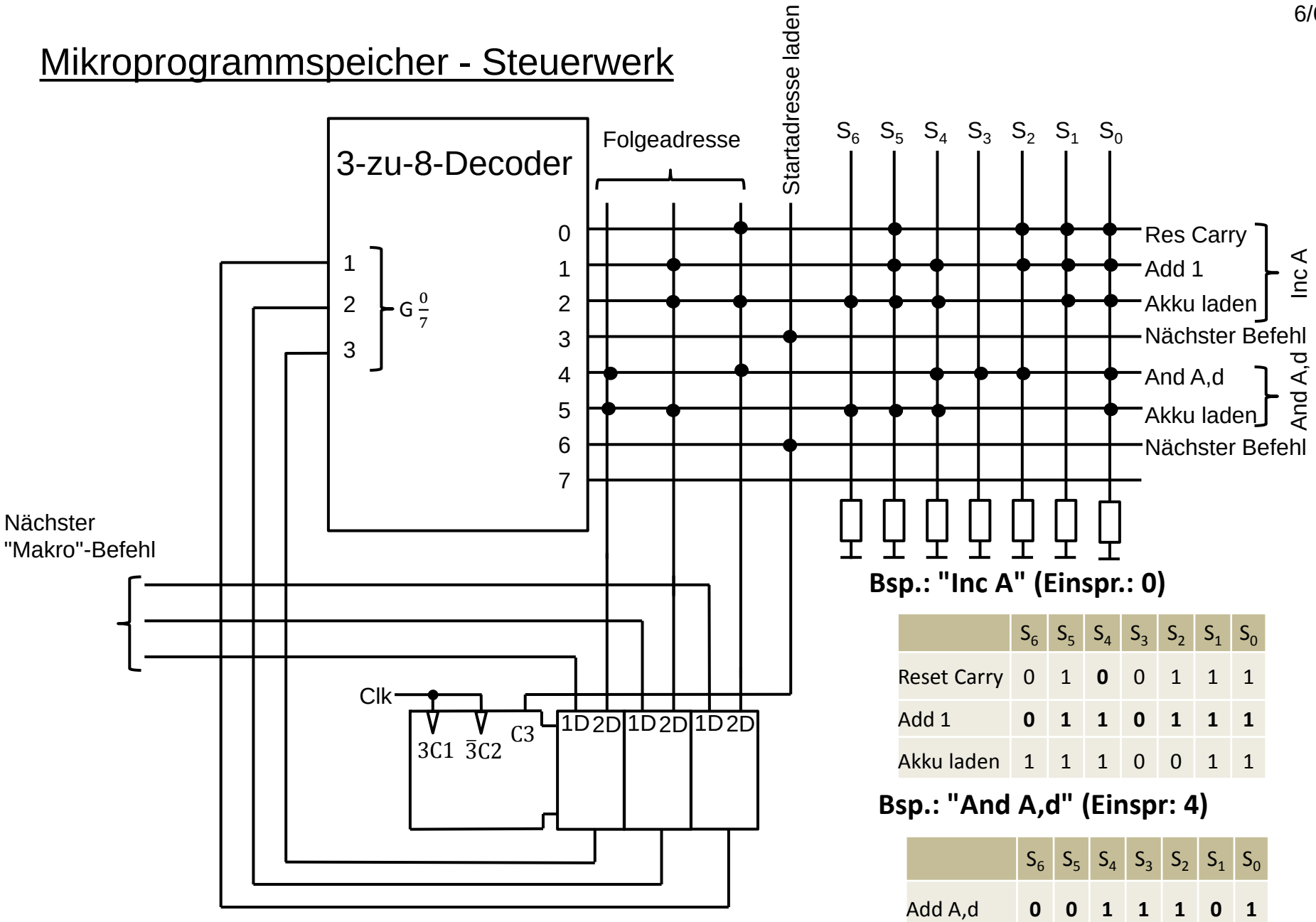
Mikroprogrammspeicher - Steuerwerk



Bsp.: "Inc A" (Einspr.: 0)

	S_6	S_5	S_4	S_3	S_2	S_1	S_0
Reset Carry	0	1	**0**	0	1	1	1
Add 1	**0**	**1**	**1**	**0**	**1**	**1**	**1**
Akku laden	1	1	1	0	0	1	1

Mikroprogrammspeicher - Steuerwerk

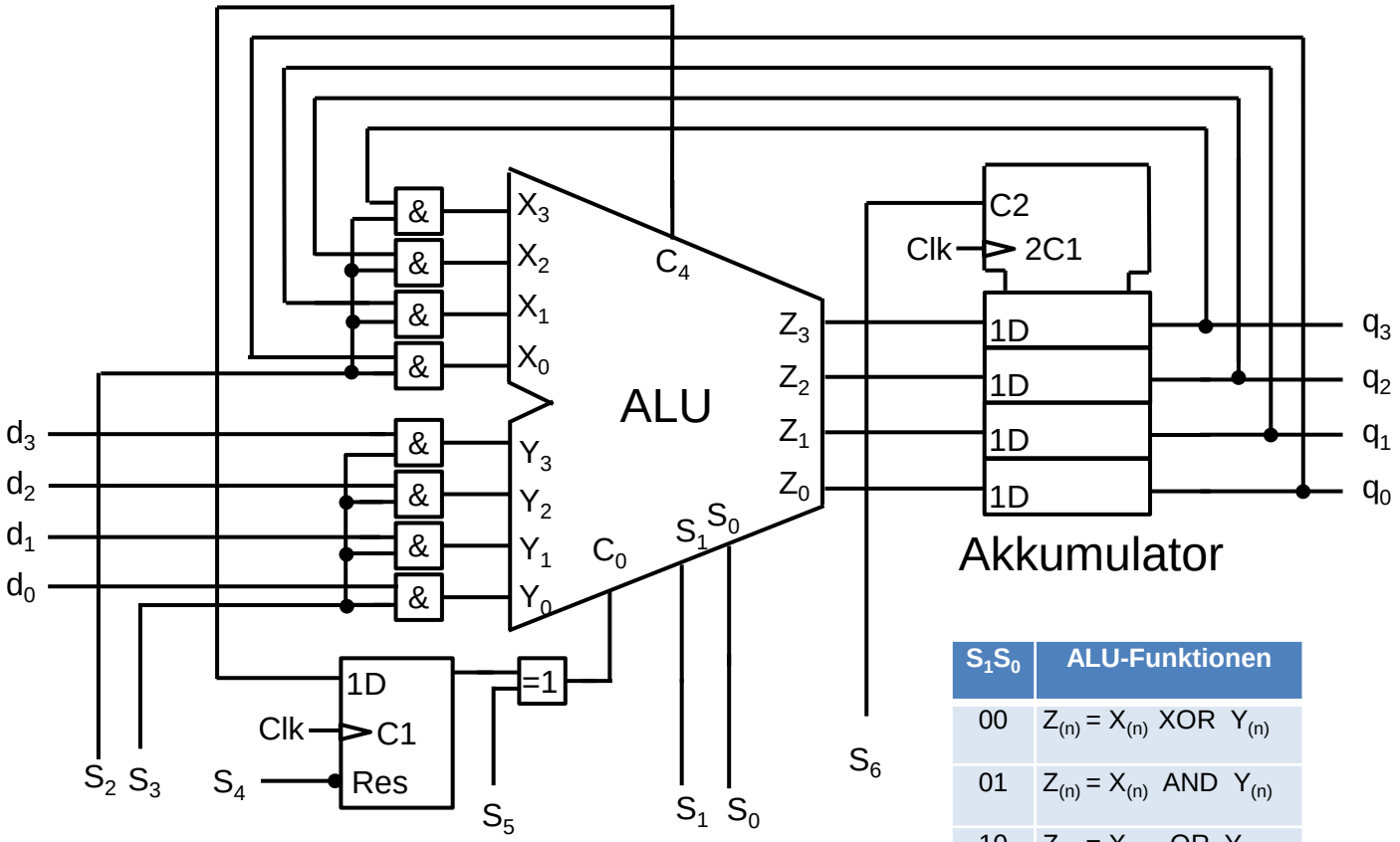


Bsp.: "Inc A" (Einspr.: 0)

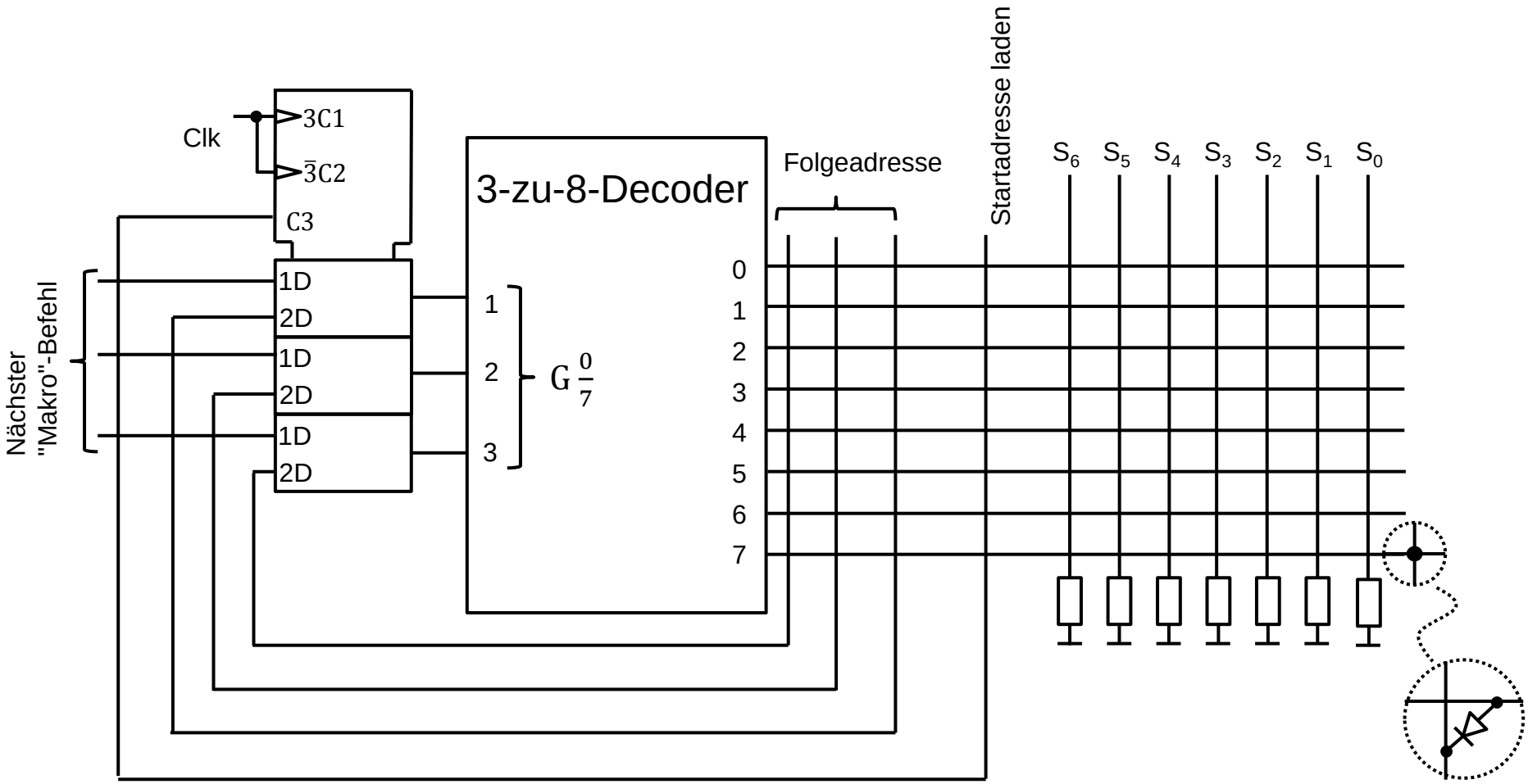
	S_6	S_5	S_4	S_3	S_2	S_1	S_0
Reset Carry	0	1	**0**	0	1	1	1
Add 1	**0**	**1**	**1**	**0**	**1**	**1**	**1**
Akku laden	1	1	1	0	0	1	1

Bsp.: "And A,d" (Einspr: 4)

	S_6	S_5	S_4	S_3	S_2	S_1	S_0
Add A,d	**0**	**0**	**1**	**1**	**1**	**0**	**1**
Akku laden	1	1	1	0	0	0	1



S_1S_0	ALU-Funktionen
00	$Z_{(n)} = X_{(n)}$ XOR $Y_{(n)}$
01	$Z_{(n)} = X_{(n)}$ AND $Y_{(n)}$
10	$Z_{(n)} = X_{(n)}$ OR $Y_{(n)}$
11	$Z_{(n)} = X_{(n)}$ PLUS $Y_{(n)}$


Clk
3C1
3̄C2
C3
1D
2D
1D
2D
1D
2D
Nächster
"Makro"-Befehl
3-zu-8-Decoder
1
2
3
G 0/7
Folgeadresse
0
1
2
3
4
5
6
7
Startadresse laden
S6
S5
S4
S3
S2
S1
S0