<S3>

A_3	A_2	A_1	$A_0=0$	$A_0=1$	S_3
0	0	0	0	0	0
0	0	1	0	0	0
0	1	0	0	1	A_0
0	1	1	1	1	1
1	0	0	1	1	1
1	0	1	X	X	X
1	1	0	X	X	X
1	1	1	X	X	X

<S2>

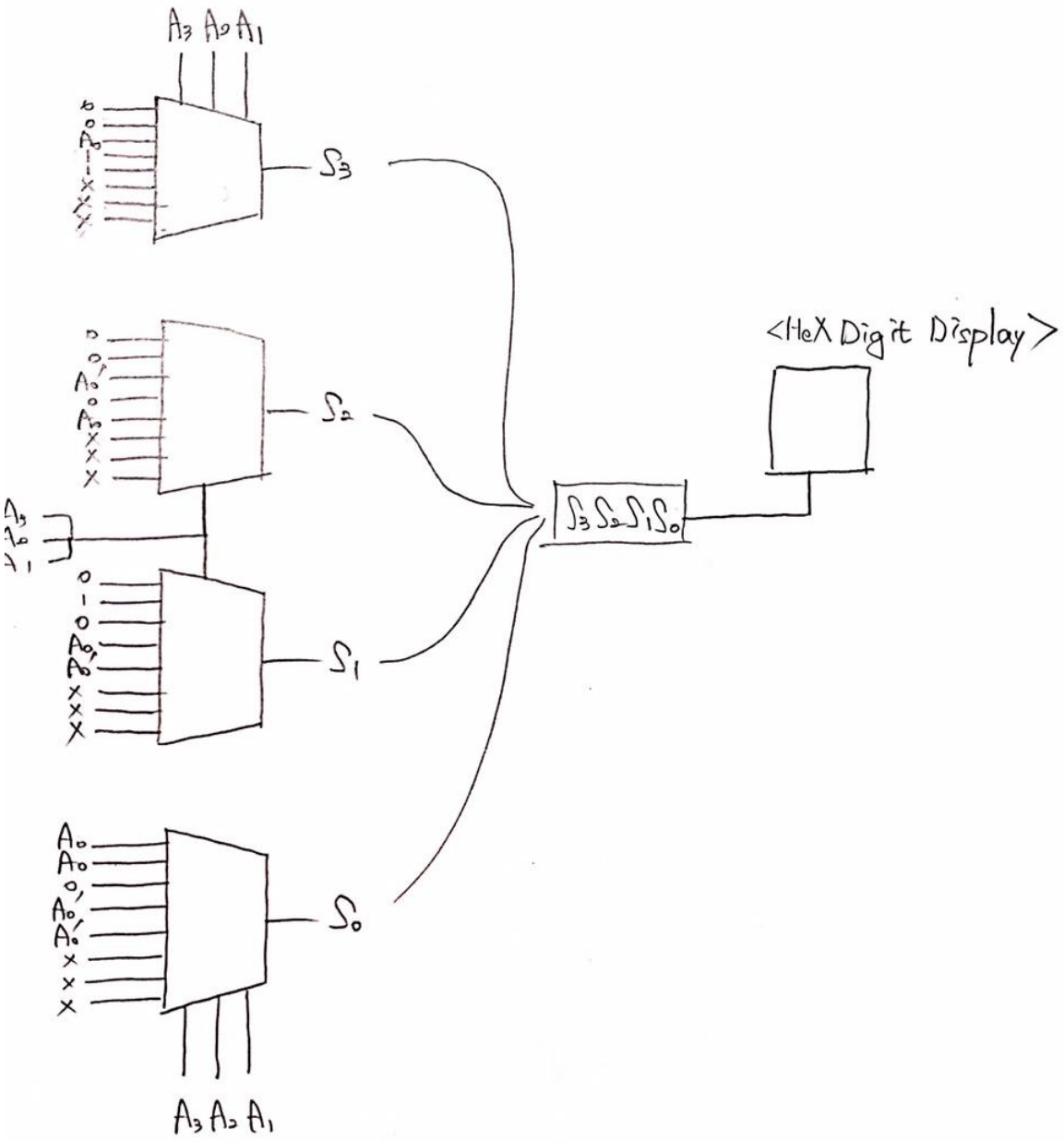
A_3	A_2	A_1	$A_0=0$	$A_0=1$	S_2
0	0	0	0	0	0
0	0	1	0	0	0
0	1	0	1	0	A_0'
0	1	1	0	0	0
1	0	0	0	1	A_0
1	0	1	X	X	X
1	1	0	X	X	X
1	1	1	X	X	X

<S1>

A_3	A_2	A_1	S_1 $A_0=0$	S_1 $A_0=1$	S_1
0	0	0	0	0	0
0	0	1	1	1	1
0	1	0	0	0	0
0	1	1	0	1	A_0
1	0	0	1	0	A_0'
1	0	1	X	X	X
1	1	0	X	X	X
1	1	1	X	X	X

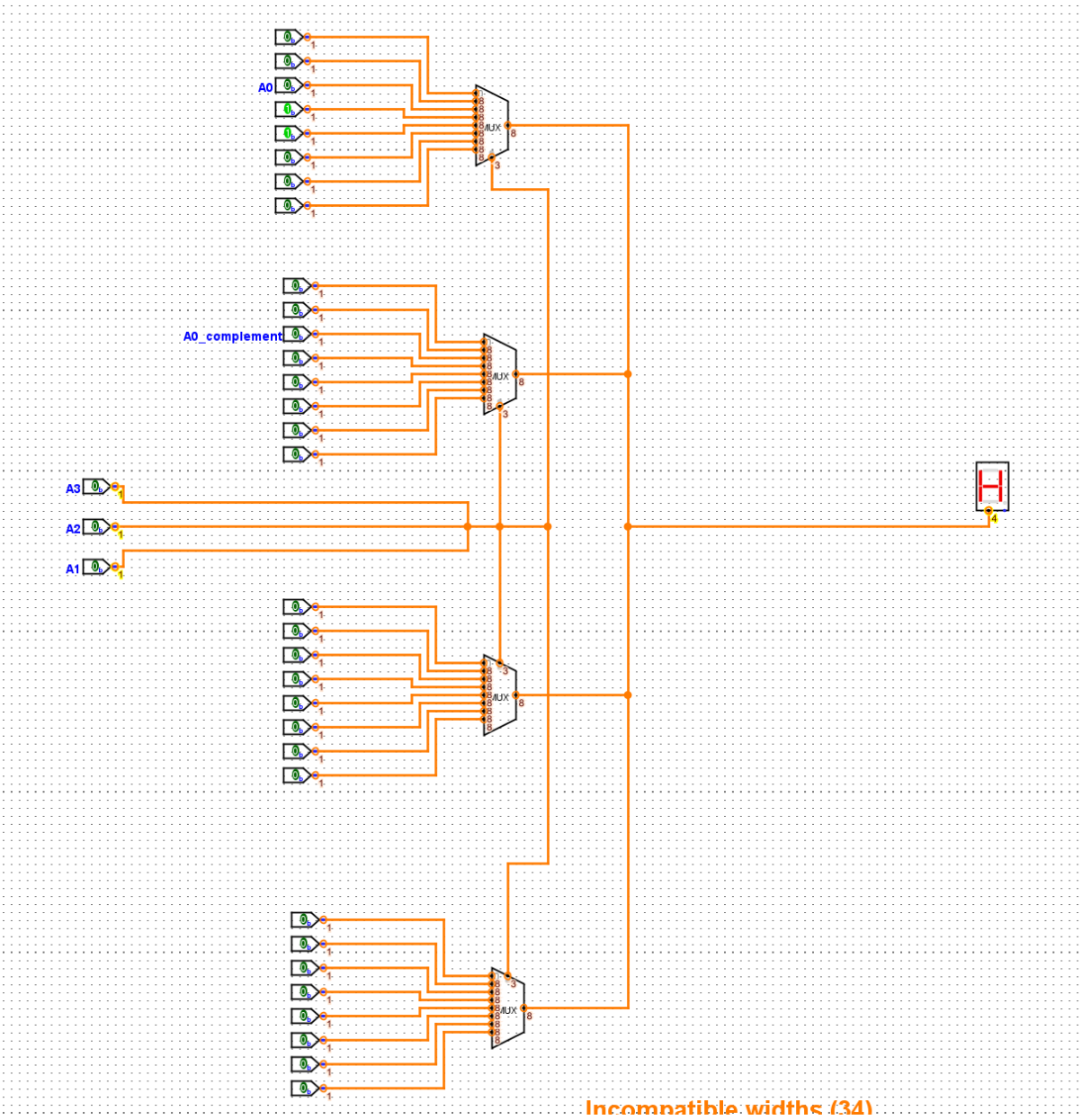
<S0>

A_3	A_2	A_1	S_0 $A_0=0$	S_0 $A_0=1$	S_0
0	0	0	0	1	A_0
0	0	1	0	1	A_0
0	1	0	0	0	0
0	1	1	1	0	A_0'
1	0	0	1	0	A_0'
1	0	1	X	X	X
1	1	0	X	X	X
1	1	1	X	X	X



(3-add)
Truth table Modification을 통해 16-to-1 mux를 8-to-1 mux로 표현했음

$S_3S_2S_1S_0$ 4bit를 "Hex Digit Display"에 연결하면 된다.


A0
A0_complement
A3
A2
A1
MUX
Incompatible widths (34)