

# Stoppuhr

Khatera Naser

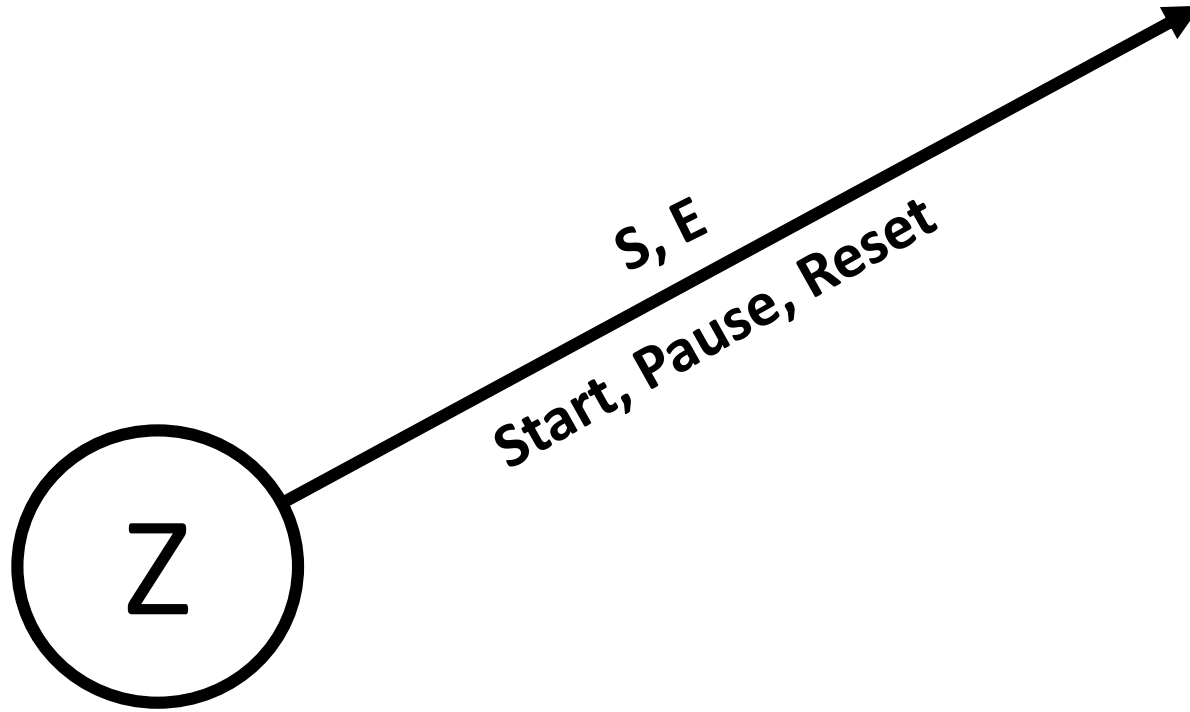
&

Fabian Kahlich

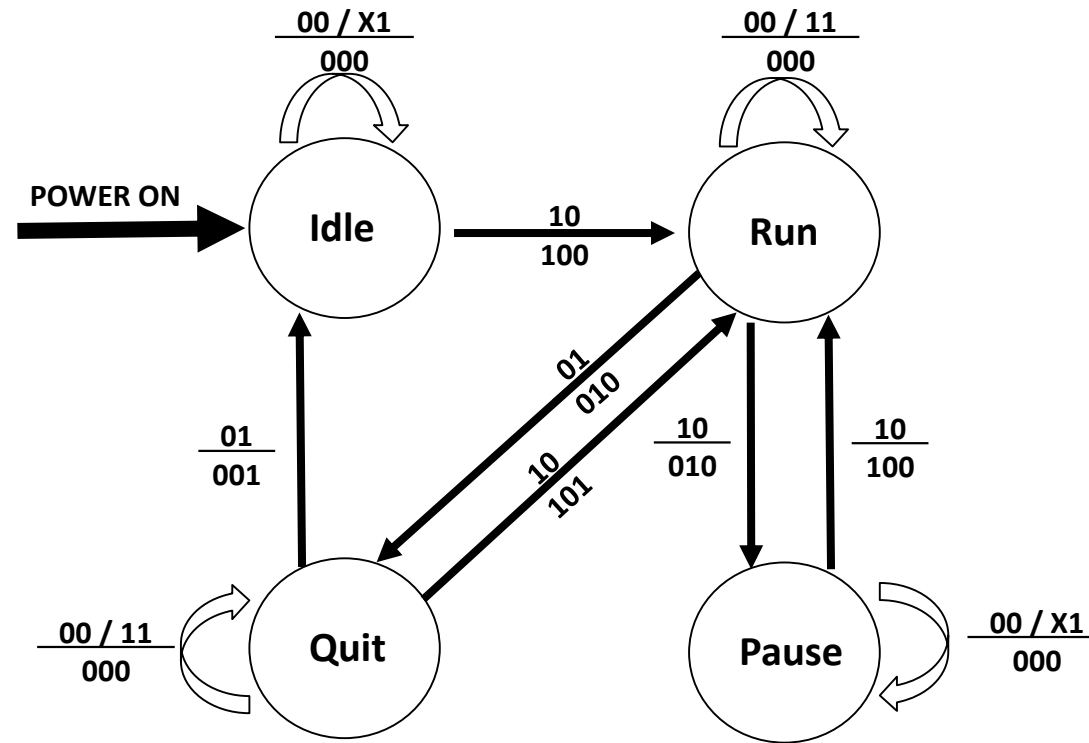
# Bestandteile

- Doppelfunktionstasten für Start- und Stopptaste
- Pulserzeuger für beide Tasten
- Zähler
- 7 – Segmentanzeigen: 4 Stück
- Multiplexer für Multiplexdisplay

# Doppelfunktionstasten



# Zustandsdiagramm



# Übergangsschaltnetz

Z1	Z0	E	S	Z1+	Z0+
0	0	0	0		
0	0	0	1		
0	0	1	0		
0	0	1	1		
0	1	0	0		
0	1	0	1		
0	1	1	0		
0	1	1	1		
1	0	0	0		
1	0	0	1		
1	0	1	0		
1	0	1	1		
1	1	0	0		
1	1	0	1		
1	1	1	0		
1	1	1	1		

# KV - Diagramm

Z1+	S		S	
E				<del>Z1</del>
				Z1
E				<del>Z1</del>
	Z0	Z0	Z0	

Z1+ =

Z0+	S		S	
E				<del>Z1</del>
				Z1
E				<del>Z1</del>
	Z0	Z0	Z0	

Z0+ =

# Ausgangsschaltnetz

Z1	Z0	E	S	Start	Pause	Reset
0	0	0	0			
0	0	0	1			
0	0	1	0			
0	0	1	1			
0	1	0	0			
0	1	0	1			
0	1	1	0			
0	1	1	1			
1	0	0	0			
1	0	0	1			
1	0	1	0			
1	0	1	1			
1	1	0	0			
1	1	0	1			
1	1	1	0			
1	1	1	1			

# KV - Diagramm

Start	S		S	
E				<del>Z1</del>
				Z1
E				<del>Z1</del>
	Z0	Z0	Z0	

Start =

Pause	S		S	
E				<del>Z1</del>
				Z1
E				<del>Z1</del>
	Z0	Z0	Z0	

Pause =

Reset	S		S	
E				<del>Z1</del>
				Z1
E				<del>Z1</del>
	Z0	Z0	Z0	

Reset =