

Multiple Initiators Firing Simultaneously

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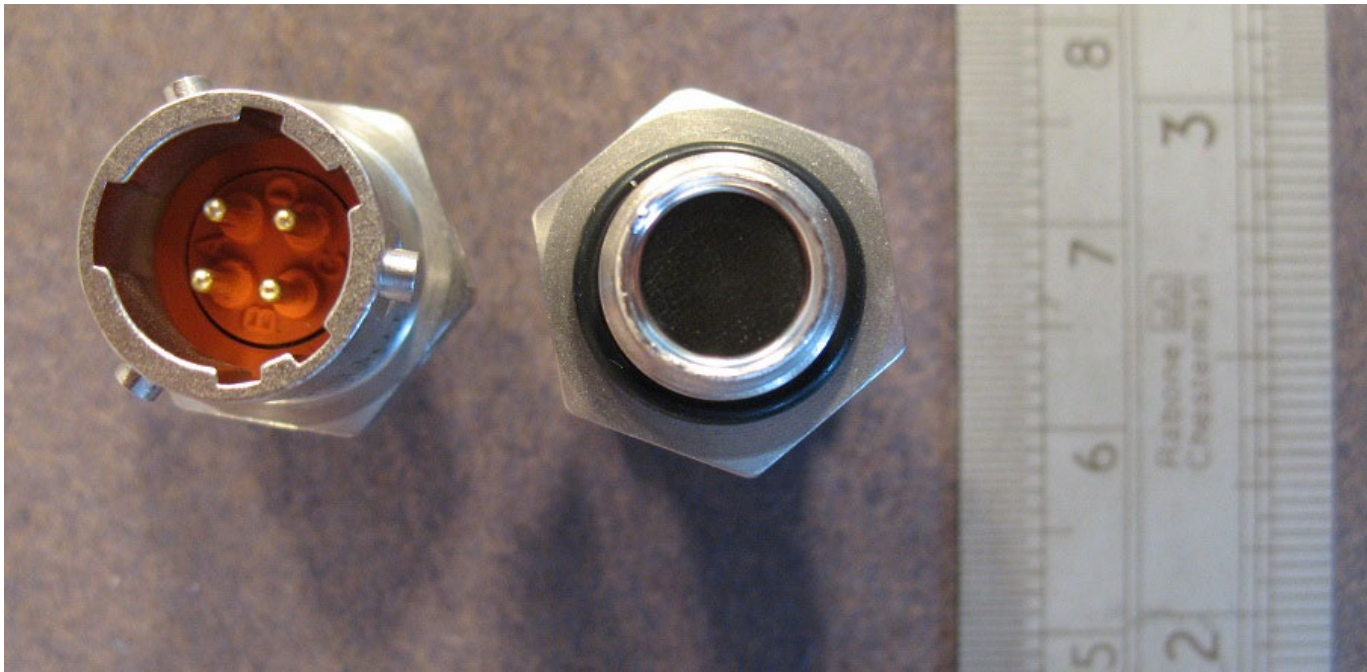
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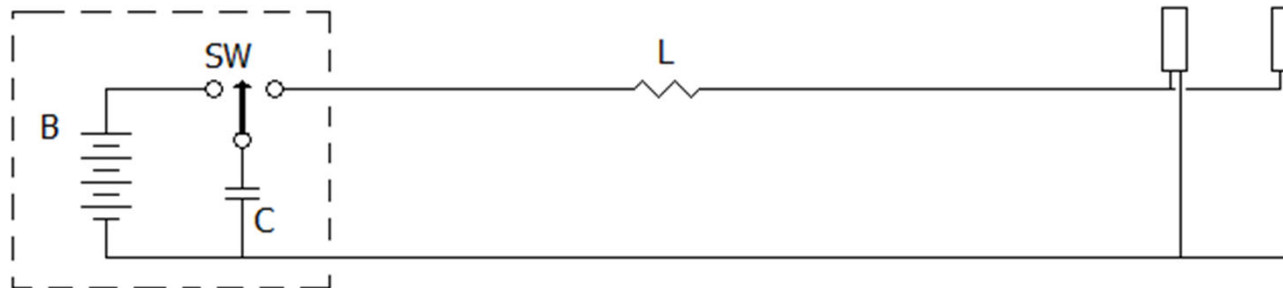
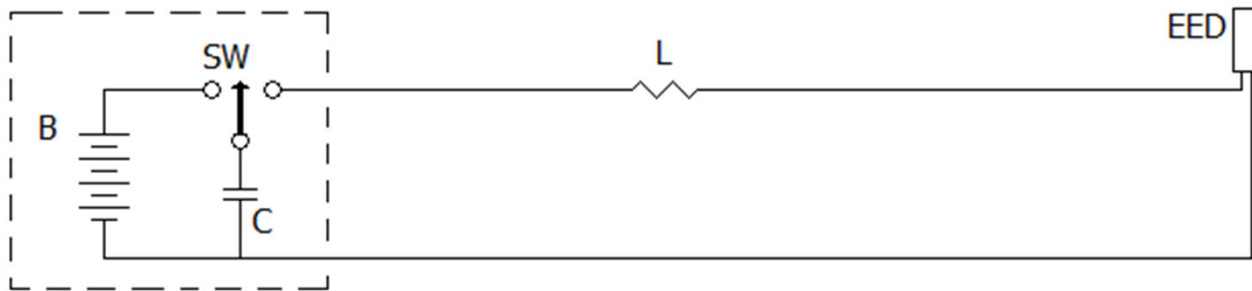
Initiator



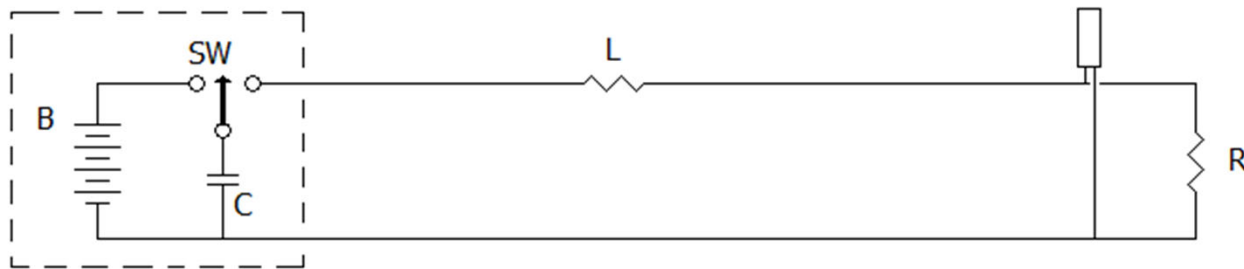
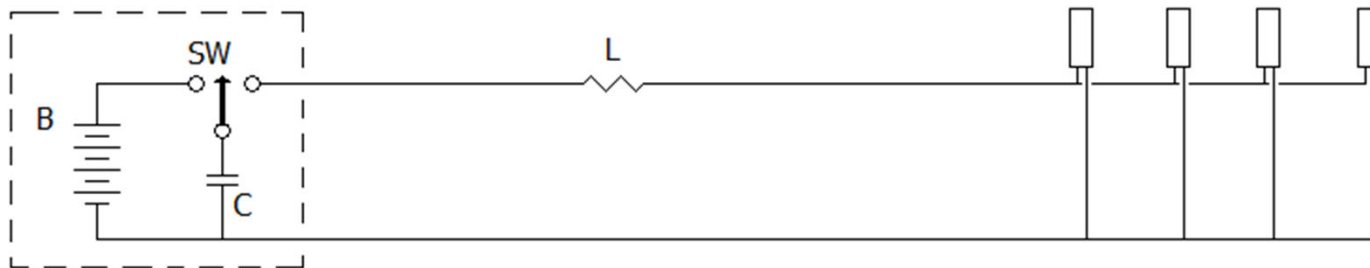
Initiator Input and Output



Fire Set, One and Two Initiators



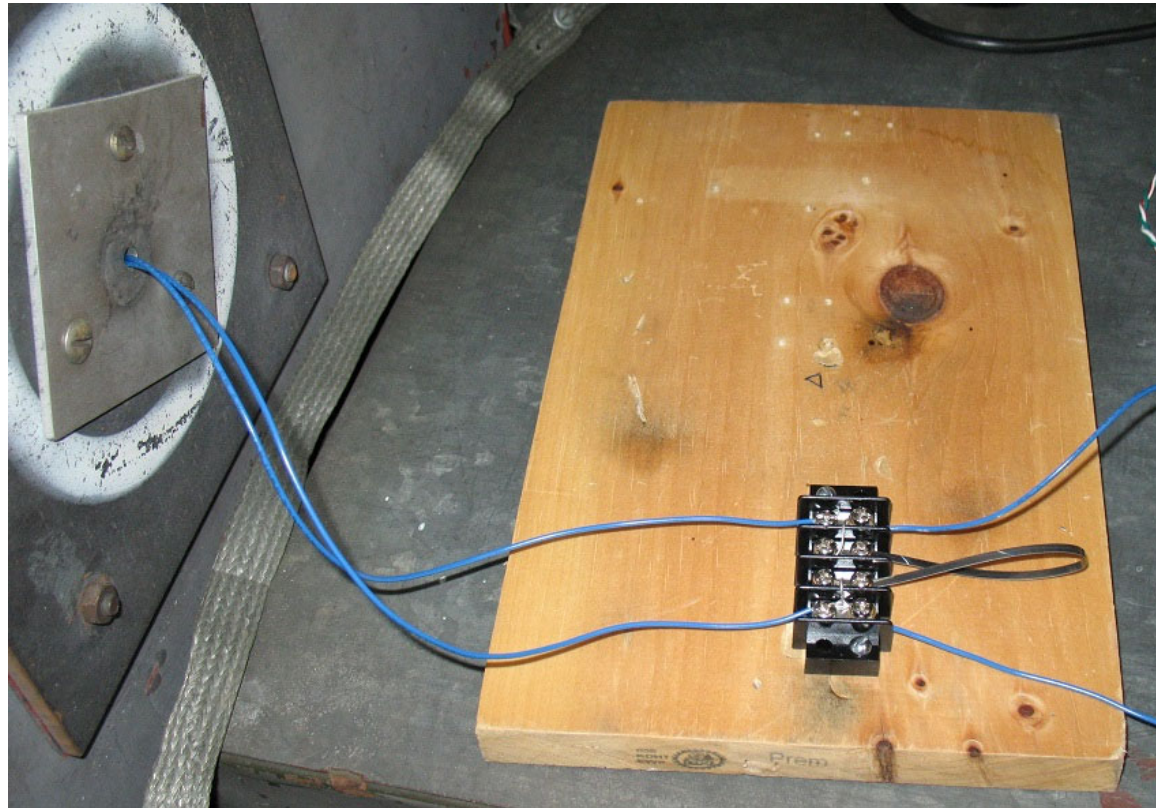
Four Initiators, Simulation



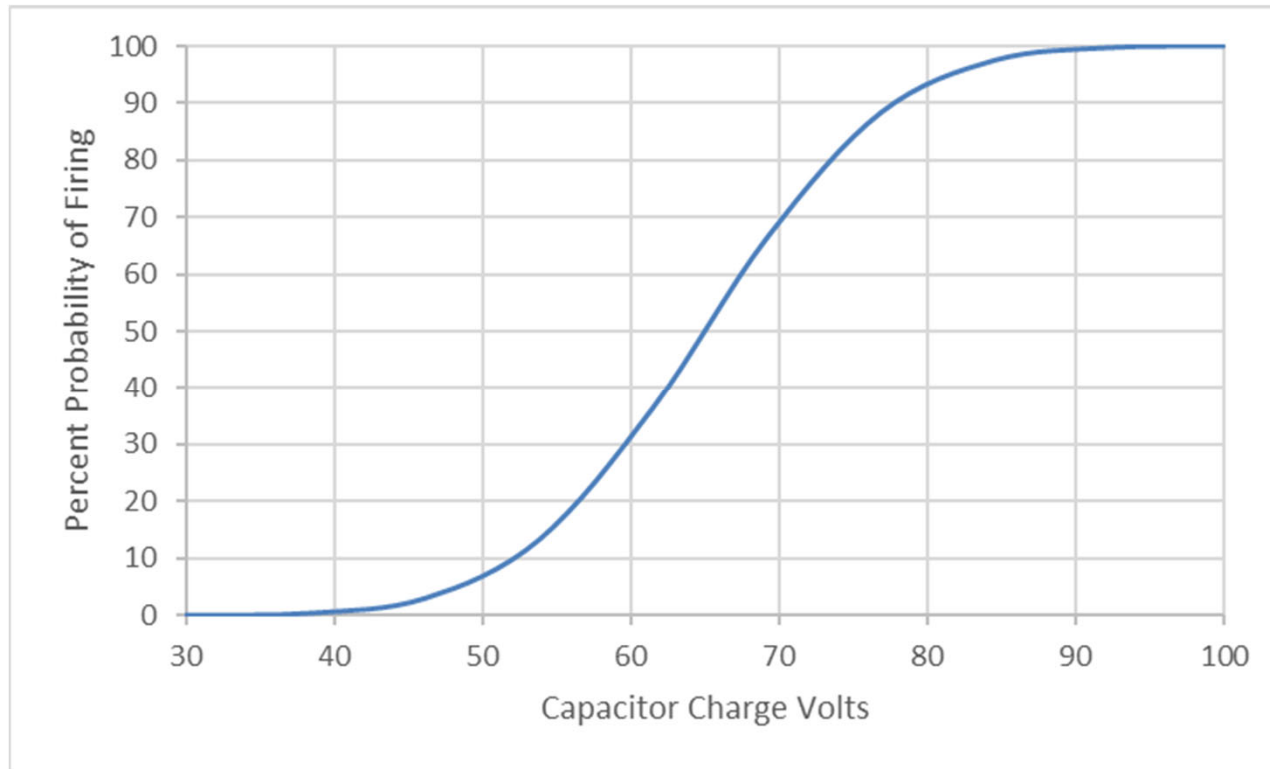
Firing One Initiator



Shot Line with Parallel Resistance 0.33 Ohm



Example Probability Distribution



Langlie Test

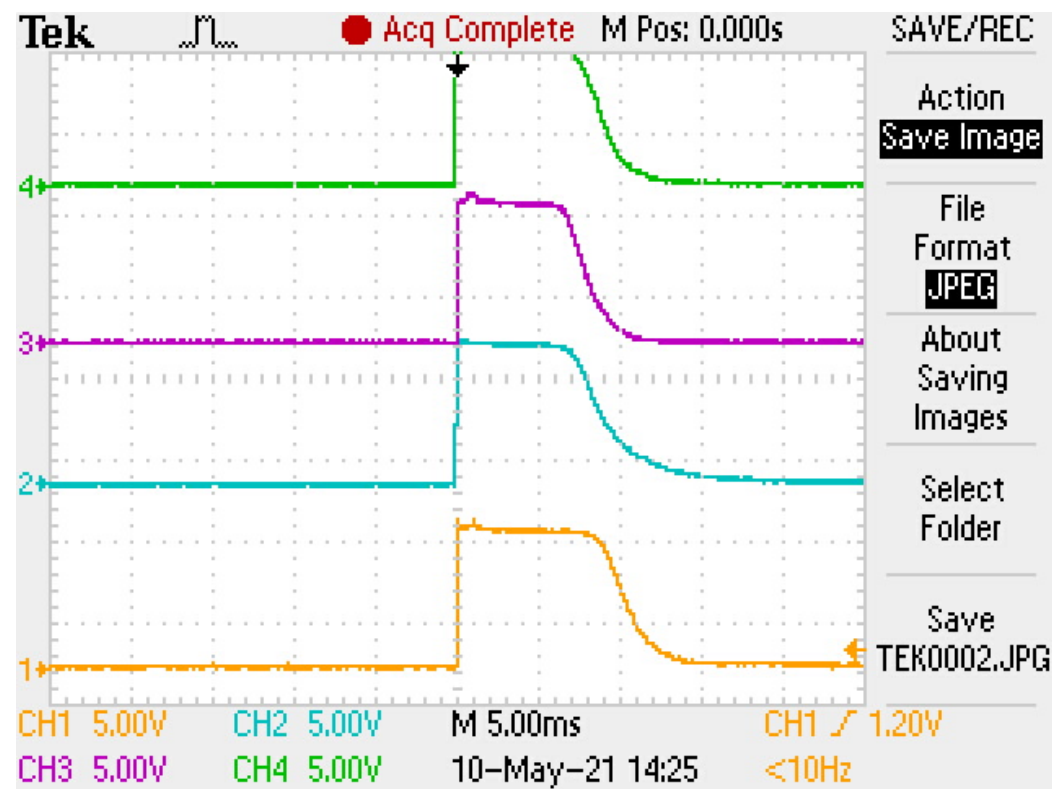
Trial	Volts	Result
1	64.23	1
2	69.40	0
3	66.77	1
4	68.07	1
5	71.45	0
6	69.74	0
7	68.24	0
8	61.26	1
9	64.66	1
10	67.15	1
11	69.27	0
12	68.20	0
13	66.40	1
14	67.30	0
15	66.85	1
16	67.07	1
17	68.16	0
18	67.61	0
19	67.23	0
20	64.18	0
21	59.41	1
22	61.75	0
23	60.57	0
24	57.72	1
25	59.13	1
26	60.42	1

Conclusion:
All-Fire with
99.9% Reliability,
95% Confidence
= 104.6 Volts

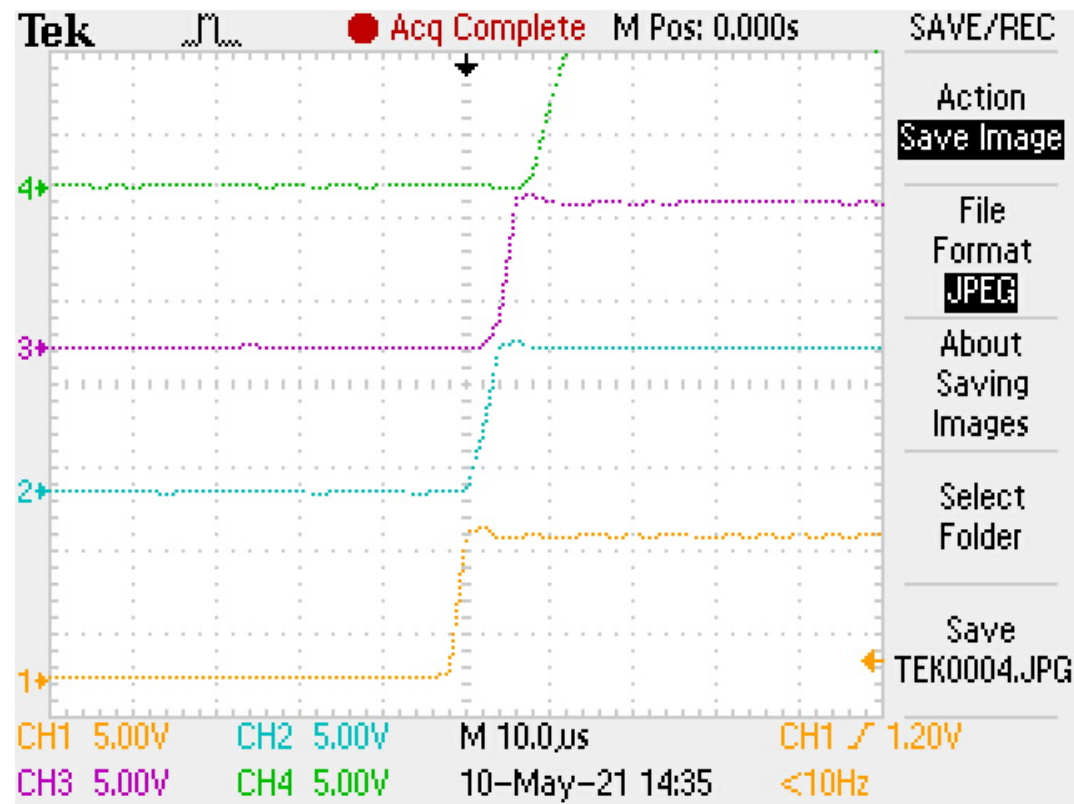




Five Milliseconds Per Division



Ten Microseconds Per Division



Conclusion:

The standard fire set can fire four of these initiators with the desired reliability and confidence.