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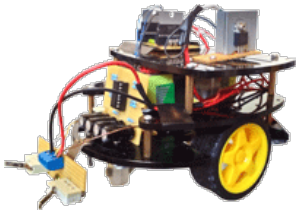
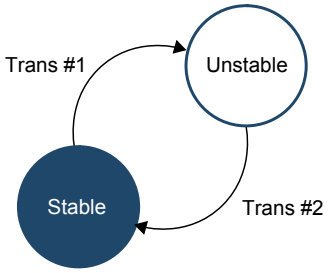
Monostable multivibrator II

State machine and signals



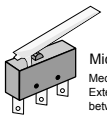
Monostable state machine:



Trans #1
dependencies:
1) MS2, MS4 micro switch sensor, fast discharging of capacitors: C1, C2 & C3, C4 respectively.

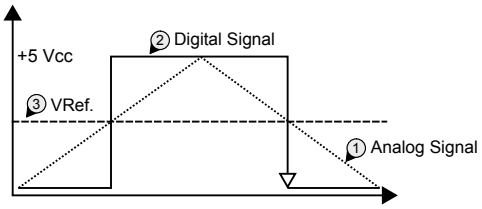
Trans #2
dependencies:
1) MS1, MS3 micro switch sensor, fast charging of capacitors: C1, C2 & C3, C4 respectively.
2) P1, P2, P3, P4, C1, C2, C3 & C4 values.

Note: Comparator is actually 1bit analog to digital converter.
Monostable multivibrator schematic could be modified for another sort of analog sensors, like IR sensor for example.
For fixed charging duration, disable/remove MS1 and MS3 micro switches.

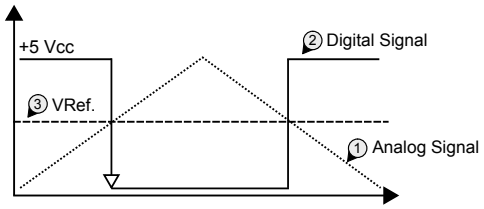


Micro switch
Mechanical interrupt.
External event for transitions between stable and unstable states.

Signals:



Comparator diagram of signals
Referent voltage to (-) input of OpAmp



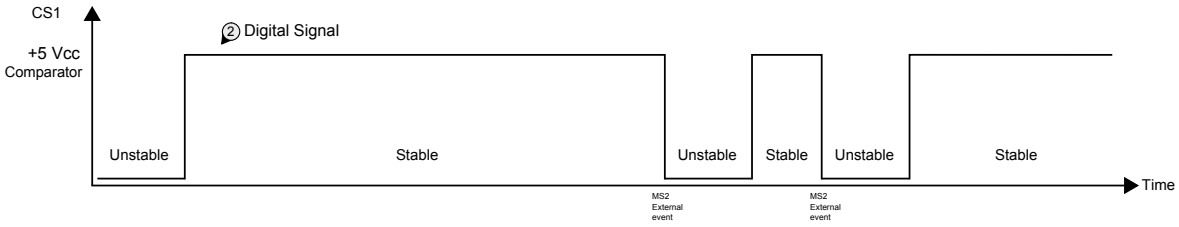
Comparator diagram of signals
Referent voltage to (+) input of OpAmp

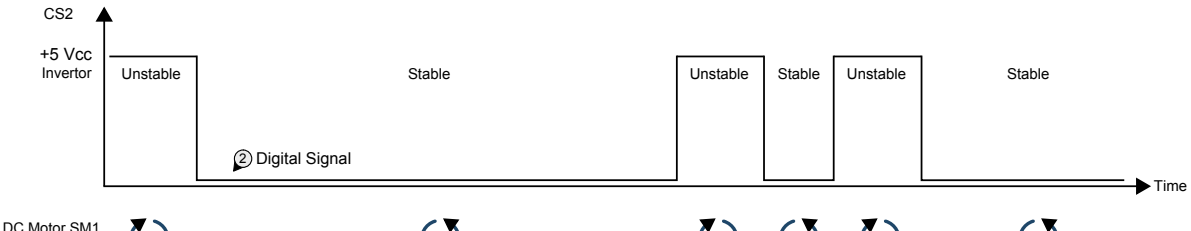
① Analog signal equation:

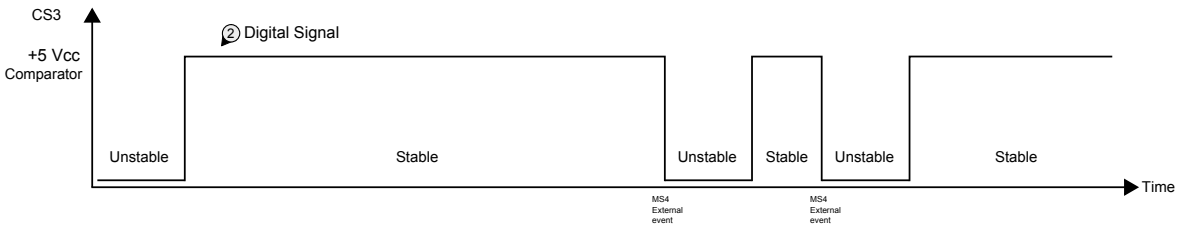
$$Vc = Vcc\,(1 - e^{-t/RC})$$

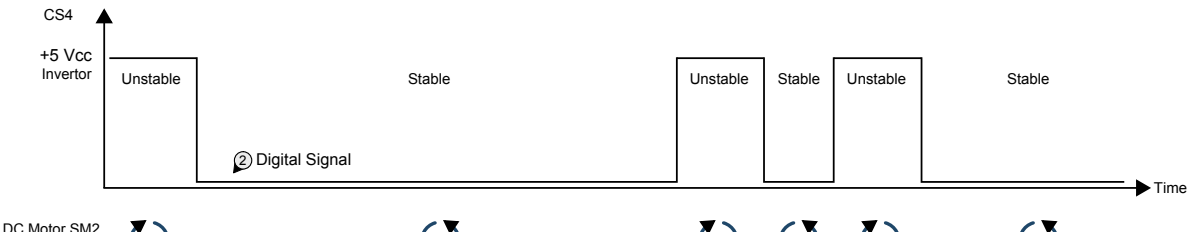
Vc - capacitor voltage
Vcc - power supply voltage
t - elapsed time
RC - time constant of the RC charging circuit

Note:
For simplicity, the analog signal is represented as a linear function.









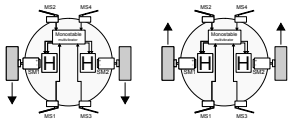
BA6222 H-Bridge:

F Input / output truth table

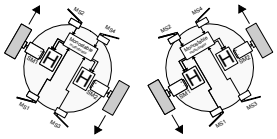
5pin（IN）	6pin（IN）	2pin（OUT）	10pin（OUT）
L	L	OPEN	OPEN
H	L	H	L
L	H	L	H
H	H	L	L

Note: HIGH level input is 3.0 V or more
LOW level input is 1.0 V or less

CS1 = CS3



CS1 = CS3 inverted



Note: CS1 = CS3 differential motion is presented.

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