

## Definitions

Digital

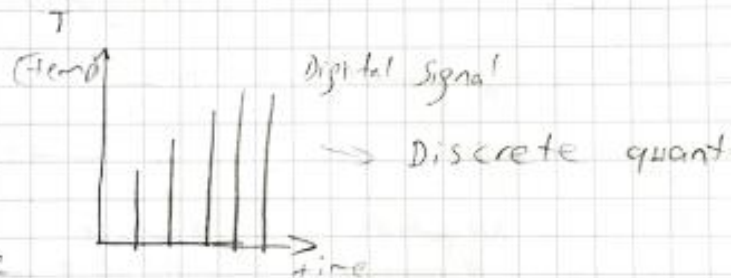
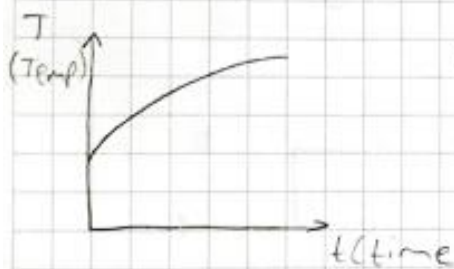
Logic

Gate

Digital and Analog quantities

Logic Levels

- Activation level
- Positive and Negative Logic



Zaman bakımından sürekli olan devrelere analog devreler denir.

Örneklenmiş, ayrılmış, quantalanmış ise  $\Rightarrow$  digital devrelere

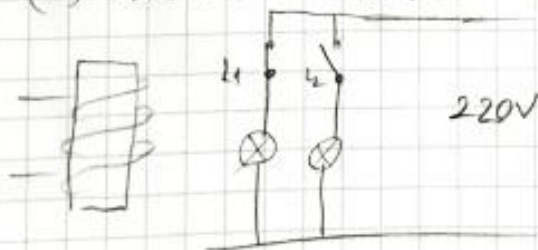
Logic Levels

(H) High = 1 = Set = True = High Voltage (5V)

4.9  
4.4  $> 4$

(L) Low = 0 = Reset = False = Low Voltage (0V)

4.5  
4.6  
5.0  $> 5$

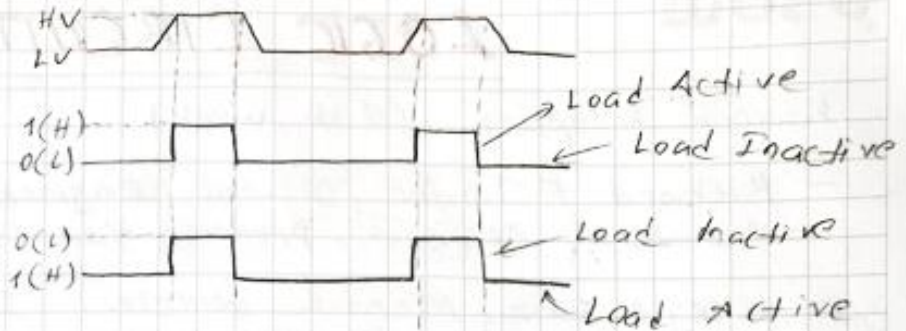
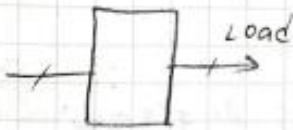


$V_{control} = 0$  L1: on L2: off

$V_{control} = 5V$  L1: off L2: on

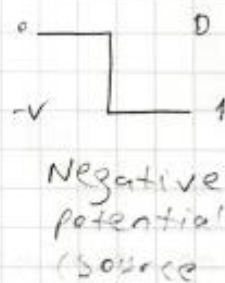
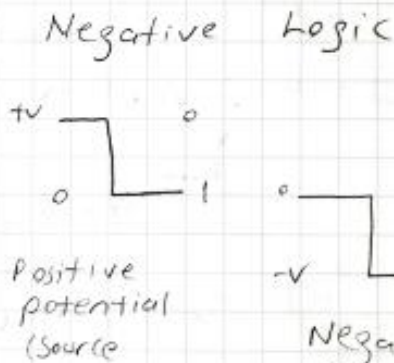
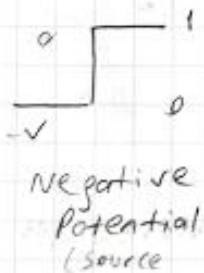
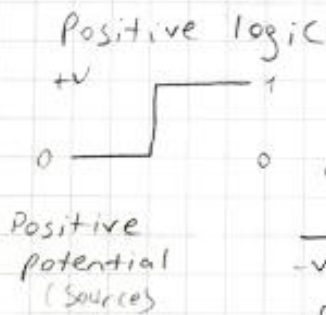
L1 (L)  $V_c = 0$

L2 (H)  $V_c = 5V$



Logic Levels  $\left\{ \begin{array}{l} HV \longleftrightarrow \text{Logic 1} \\ LV \longleftrightarrow \text{Logic 0} \end{array} \right\}$  Positive Logic

$HV \longleftrightarrow \text{Logic 0}$   
 $LV \longleftrightarrow \text{Logic 1}$  } Negative Logic



example

$HLLH$   
 $PL \rightarrow 1001$   
 $NL \rightarrow 0110$



JTL	CMOS
5V	5V
2.0	3.5
0.8	1.5
0	0

# Pulse waveform

