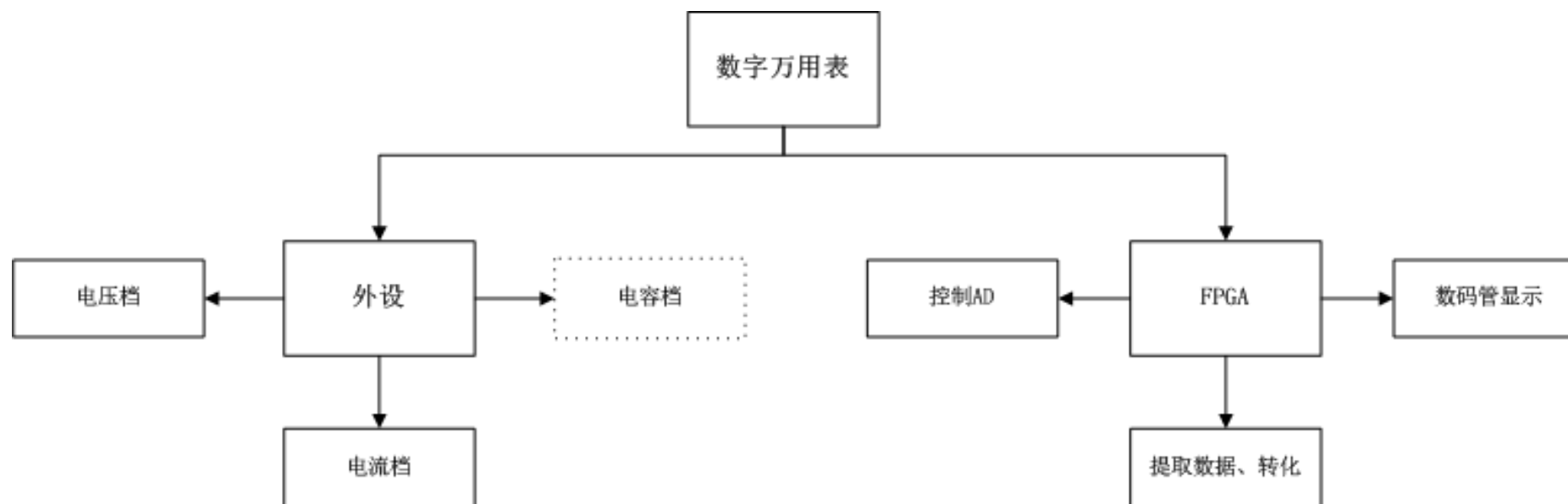


# 数字万用表

《数字系统课程设计》

61009111 袁云辉

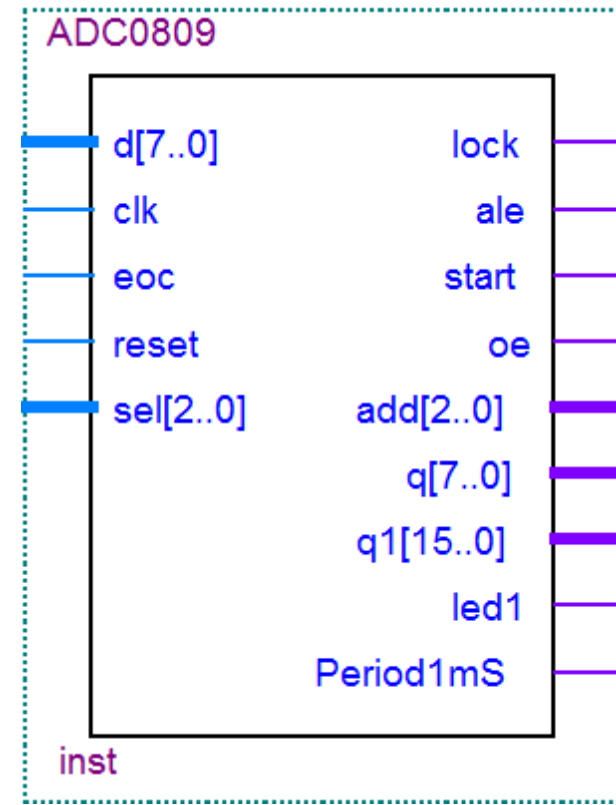
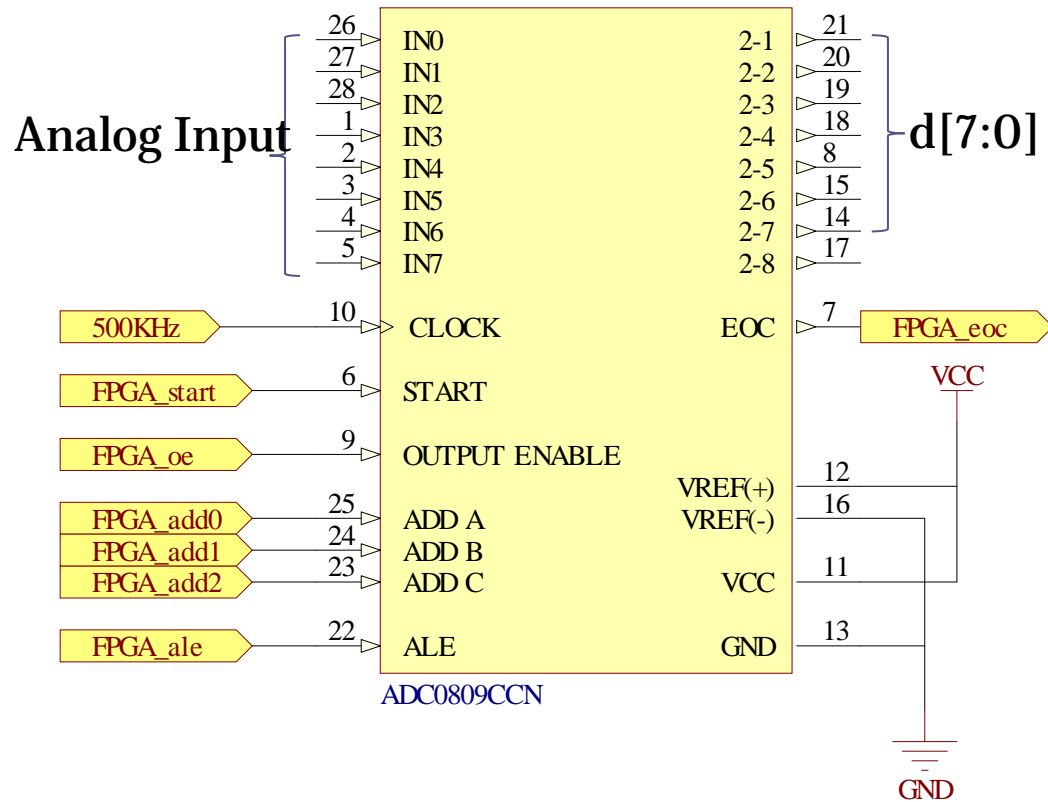
# 设计思想



外设占较大的比重

# 设计流程

## Main Block



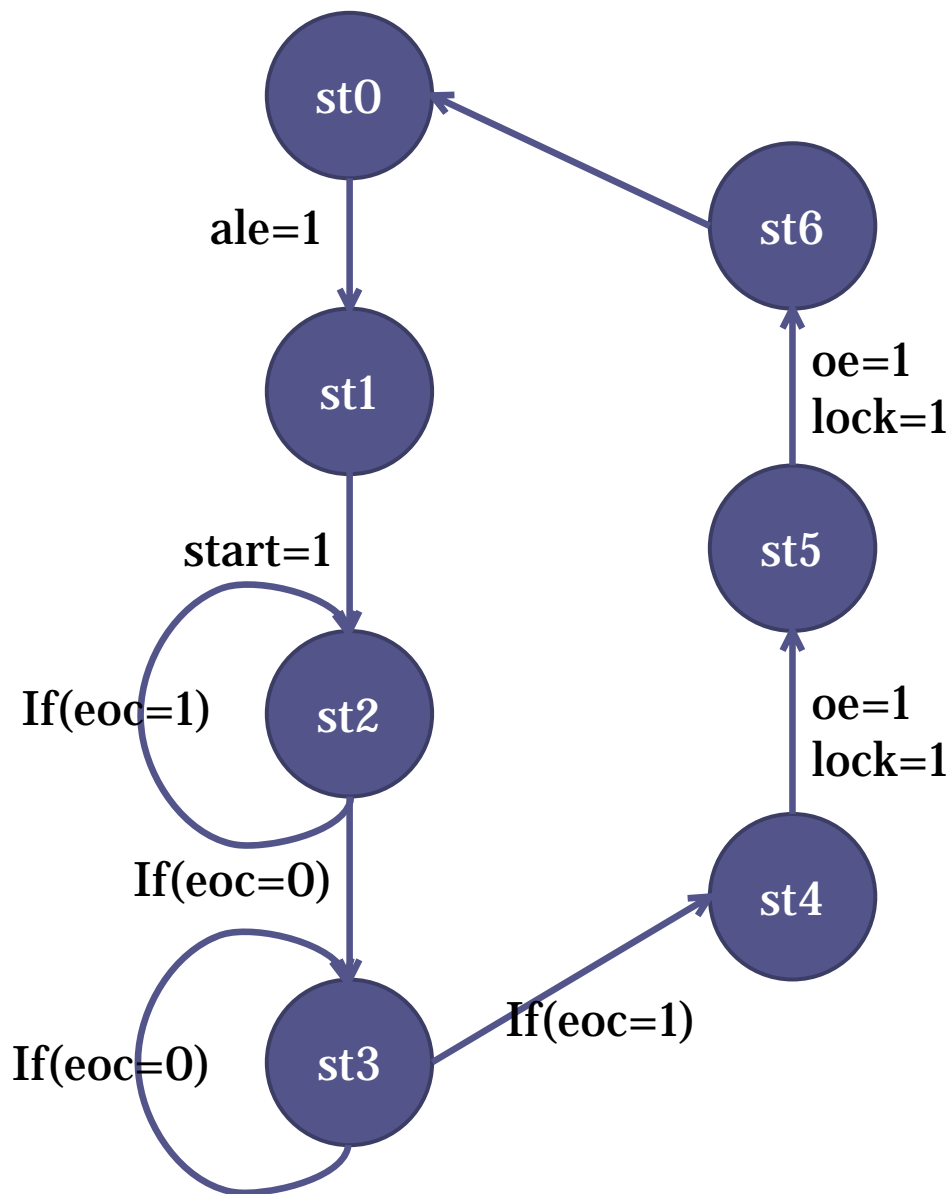
# 设计流程

AD状态机

Parameter	Value	Type
st0	000	Unsigned Binary
st1	001	Unsigned Binary
st2	010	Unsigned Binary
st3	011	Unsigned Binary
st4	100	Unsigned Binary
st5	101	Unsigned Binary
st6	110	Unsigned Binary

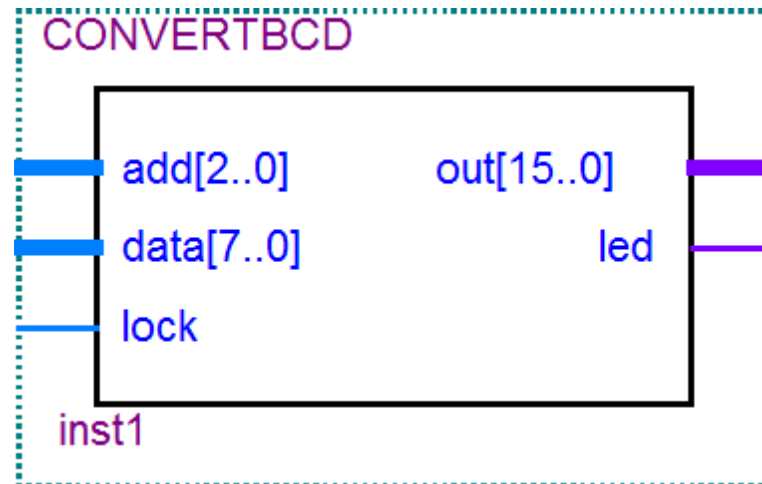
st0: ale<=0;start<=0;oe<=0;lock<=0;

档位状态机



# 设计流程

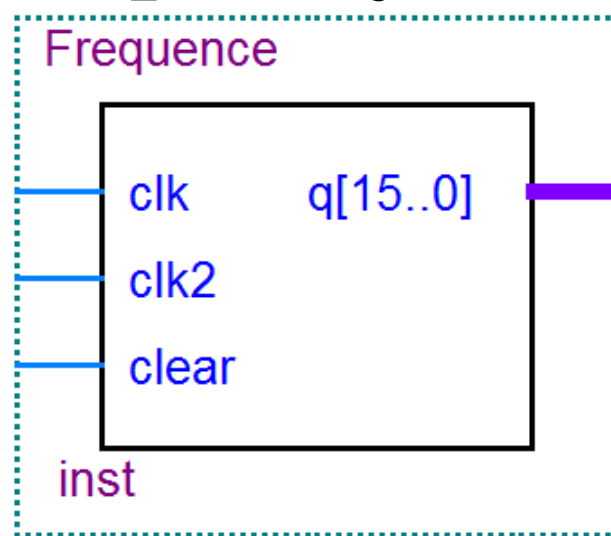
## Data Block



负责处理转化后的数据，把8位二进制数转化为BCD码，输出到四个数码管进行显示，并能根据三位开关不同的状态自动切换转化方式。

## 设计流程

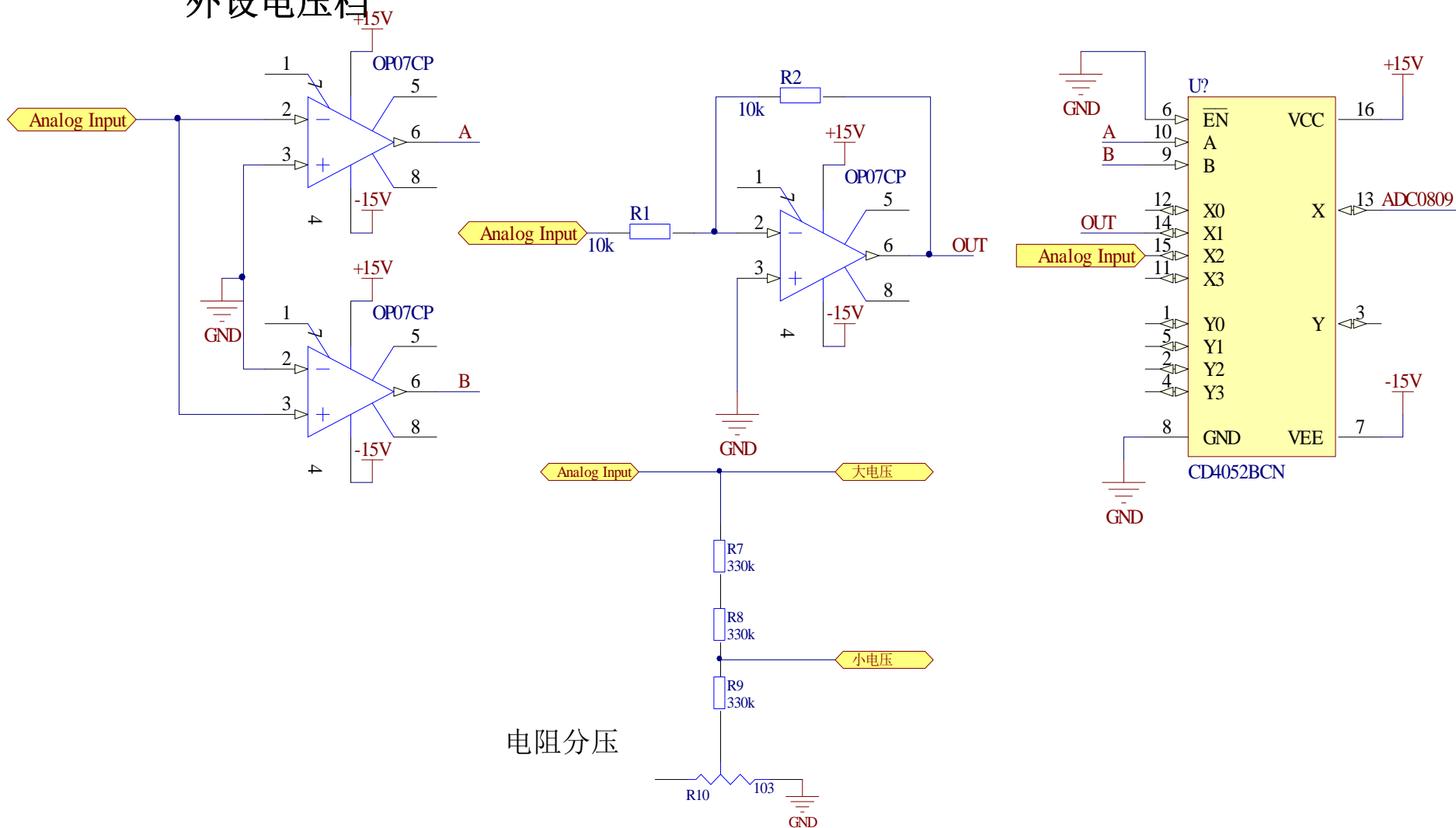
# Frequency Block



负责对时钟进行分频，定时计数，得到555输出波形的频率，并计算得到相应的电容值

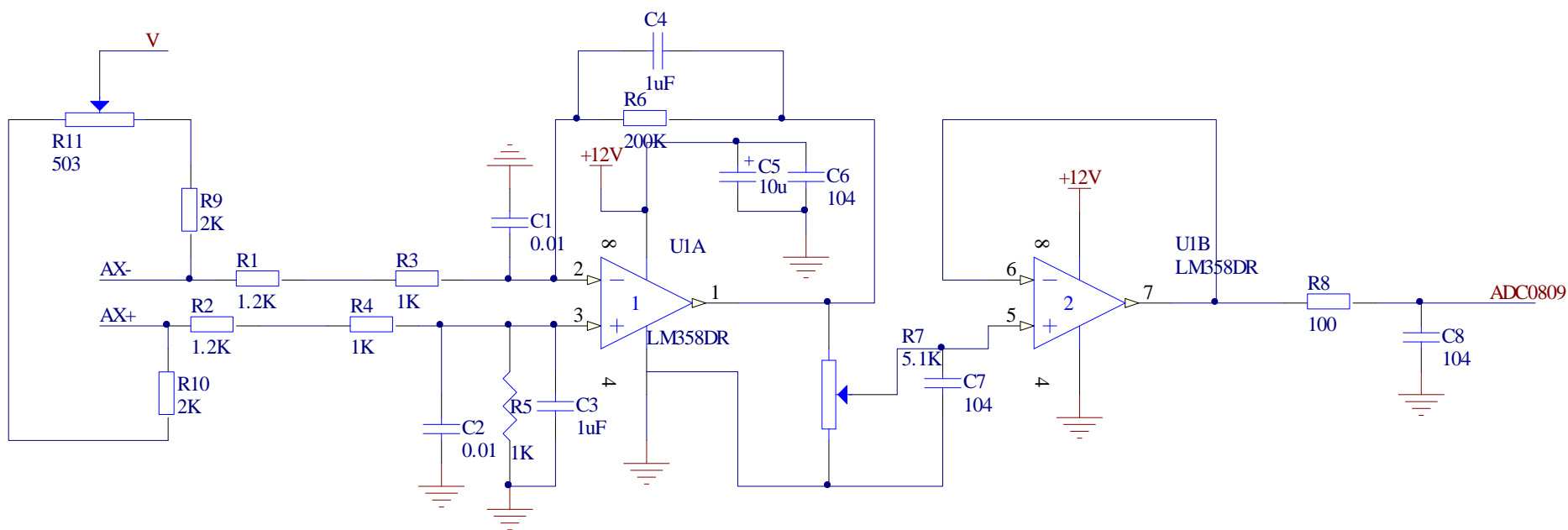
# 设计流程

## 外设电压档



# 设计流程

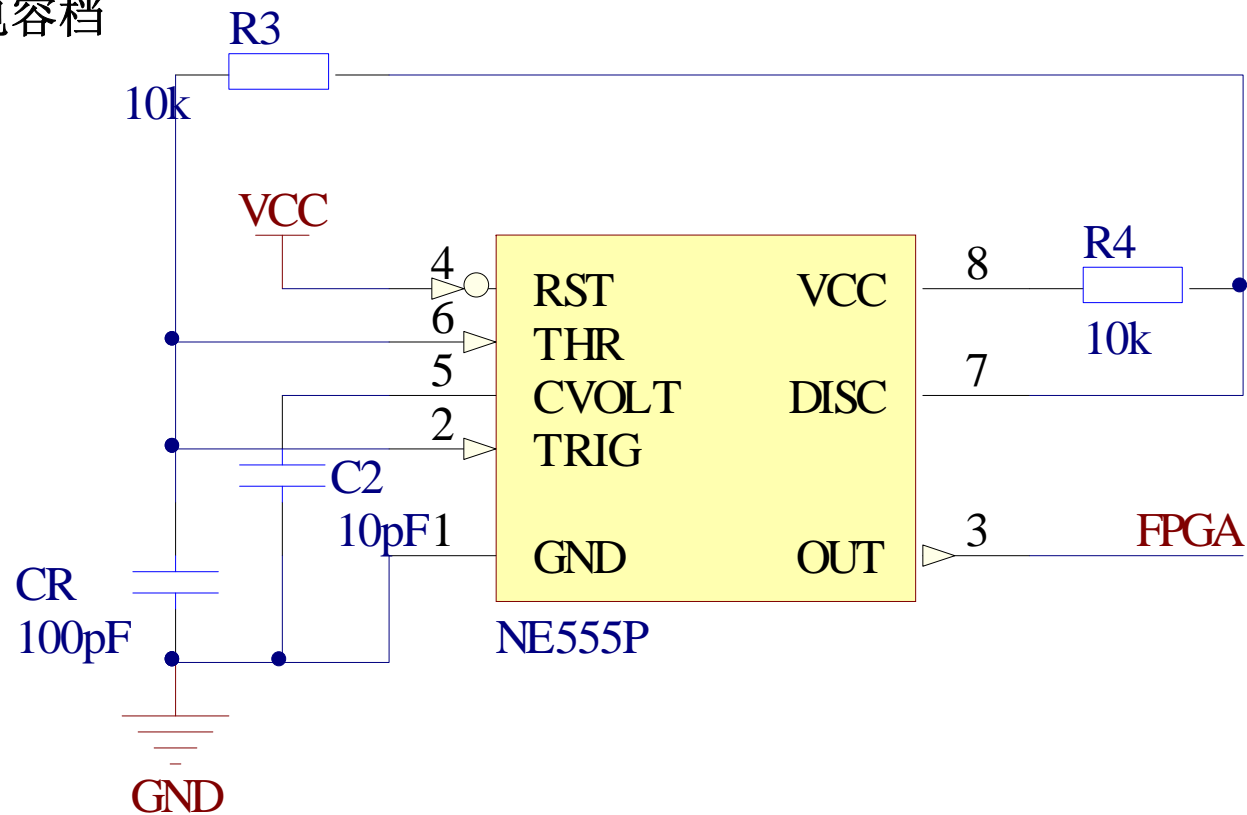
## 外设电流档



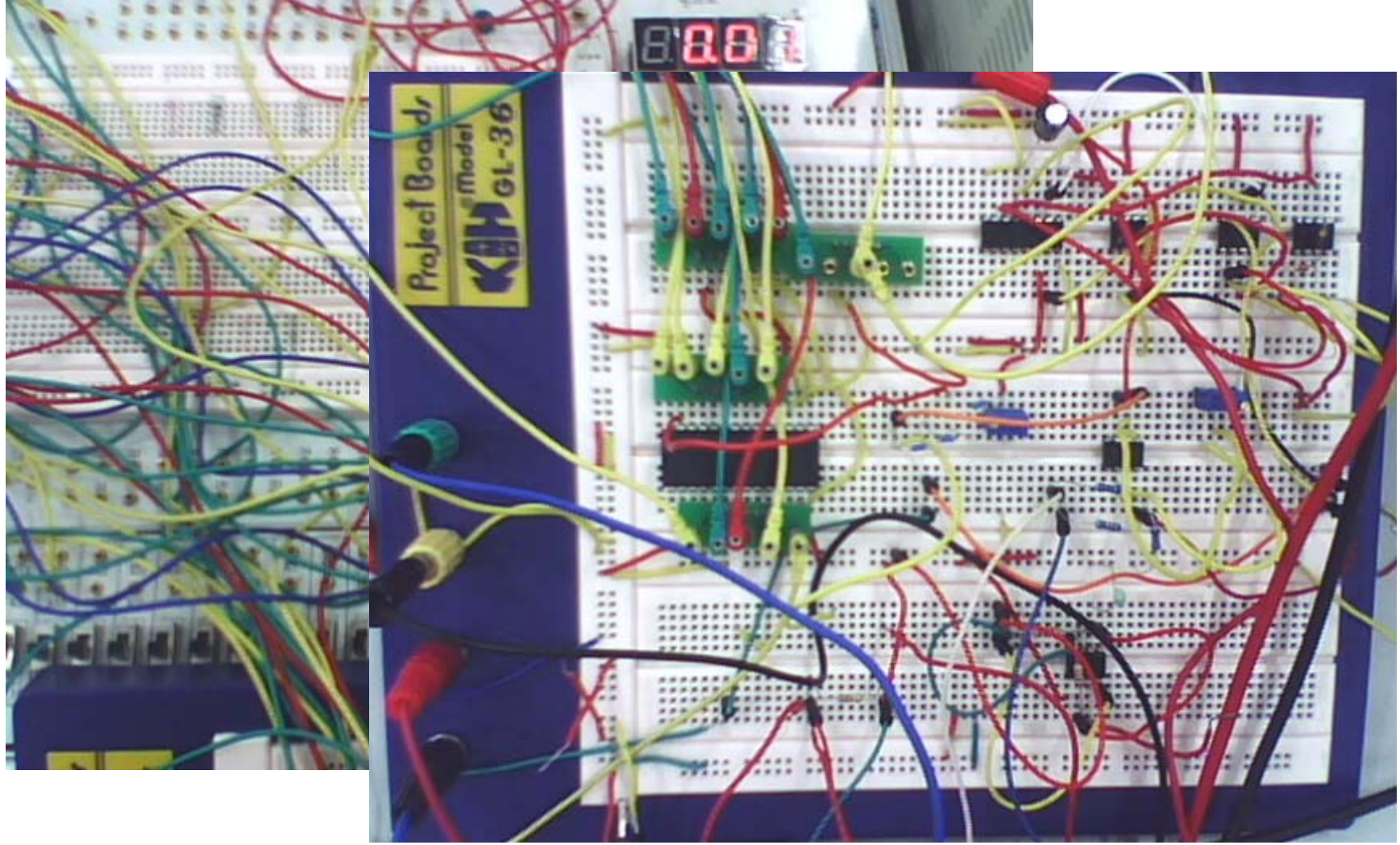


# 设计流程

外设电容档



$$f = \frac{1.45}{(R_1 + 2R_2)C_R}$$





Thank You