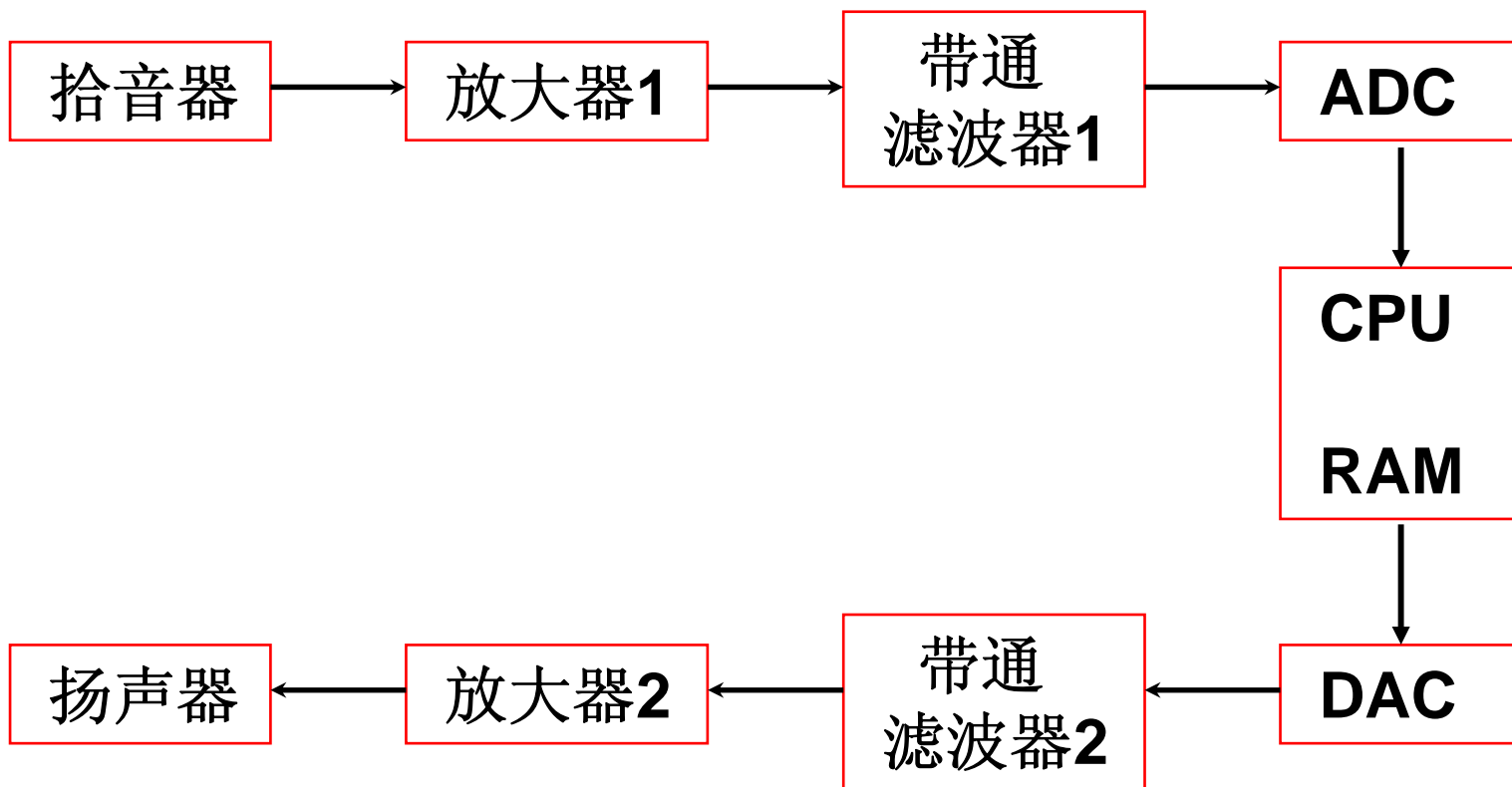
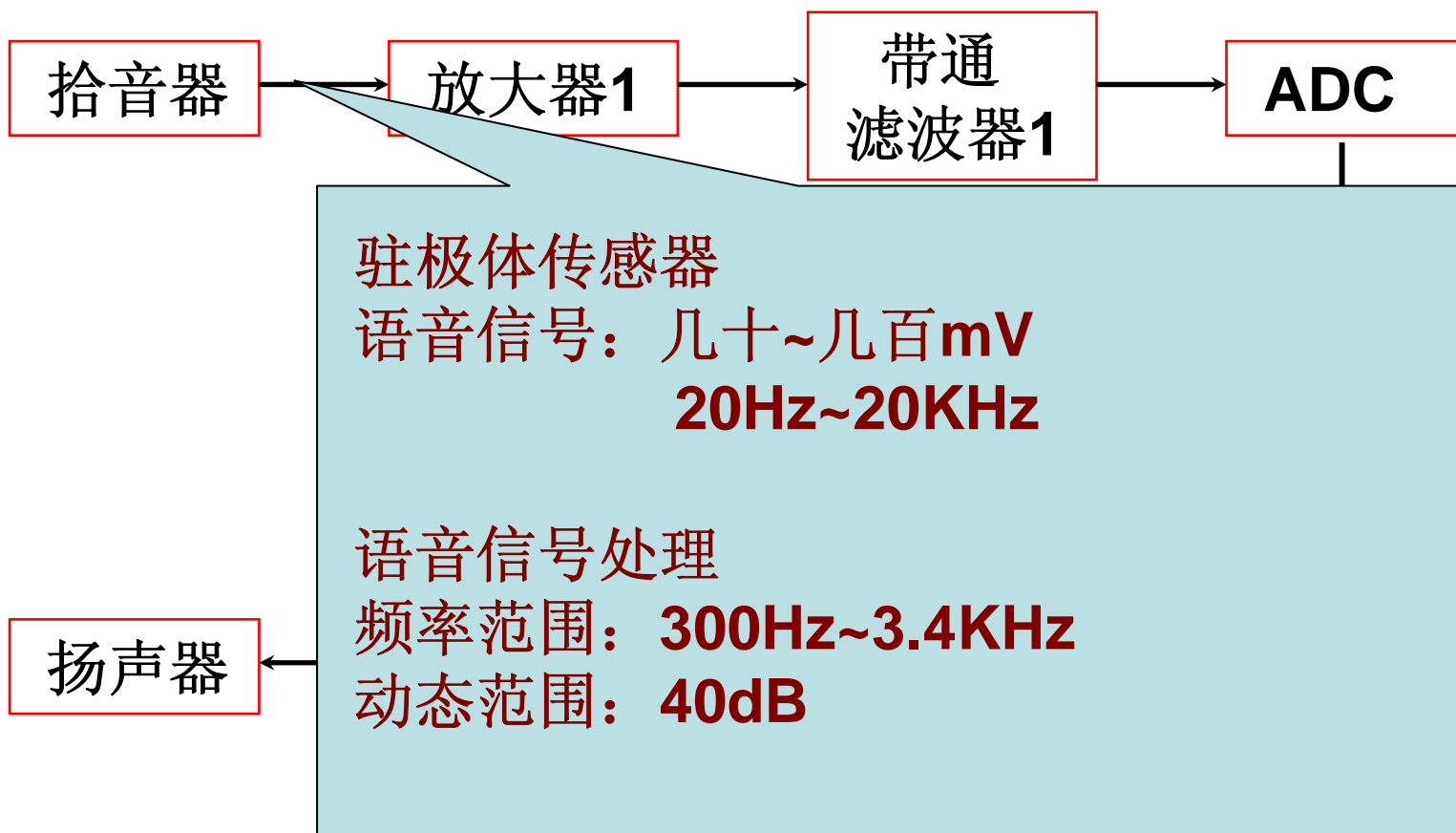


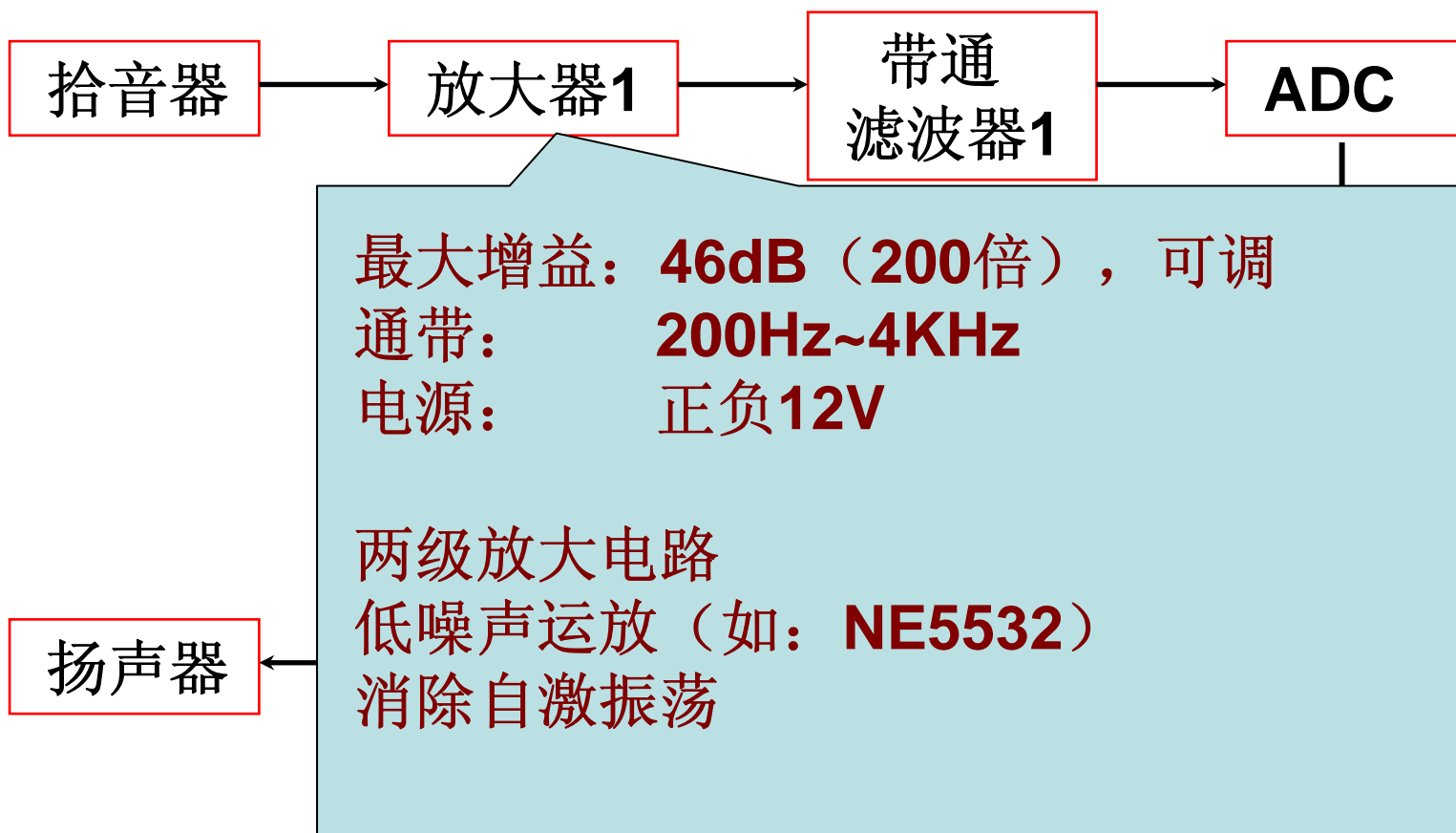
# 数字化语音存储与回放系统



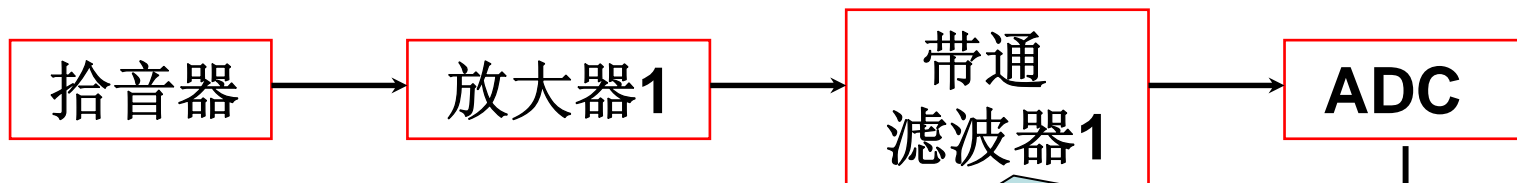
# 数字化语音存储与回放系统



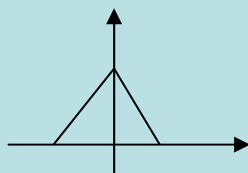
# 数字化语音存储与回放系统



# 数字化语音存储与回放系统

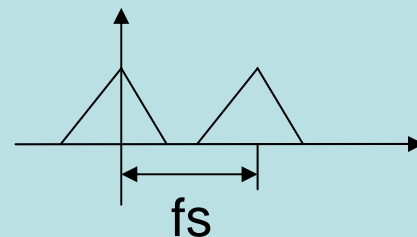


反混叠滤波电路

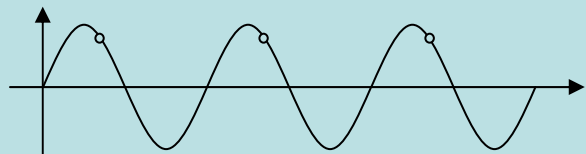


⇒

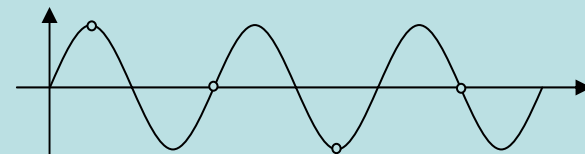
采样



当  $f_s < 2 f_{max}$  时，产生混叠

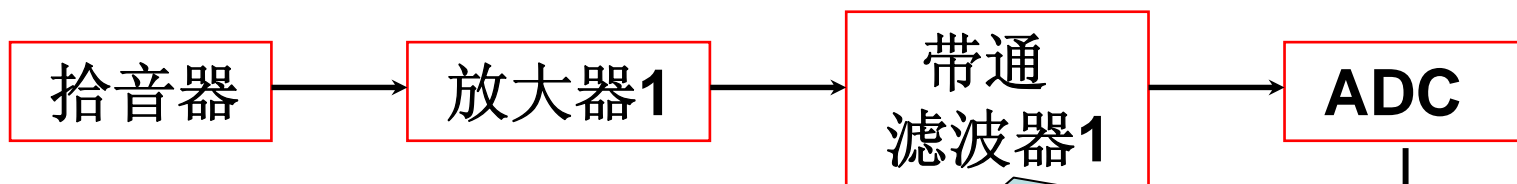


$f_s = f$



$f_s = 4/3f$

# 数字化语音存储与回放系统



## RC有源滤波器

通带 : **300Hz~3.4KHz** (误差**10%**)

通带增益: **1**

阻带衰减: **20dB/倍频**

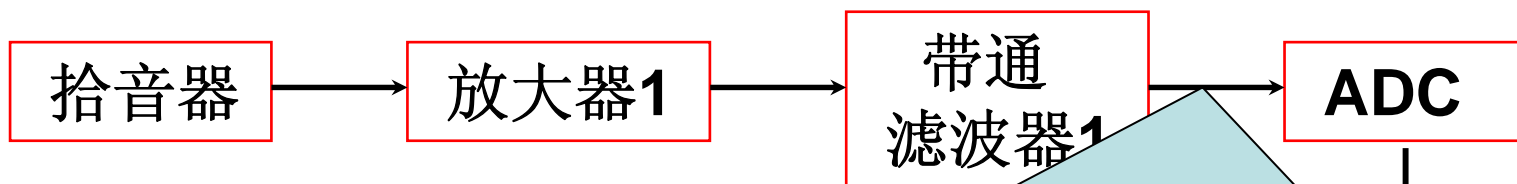
电源: **正负12V**

扬声器

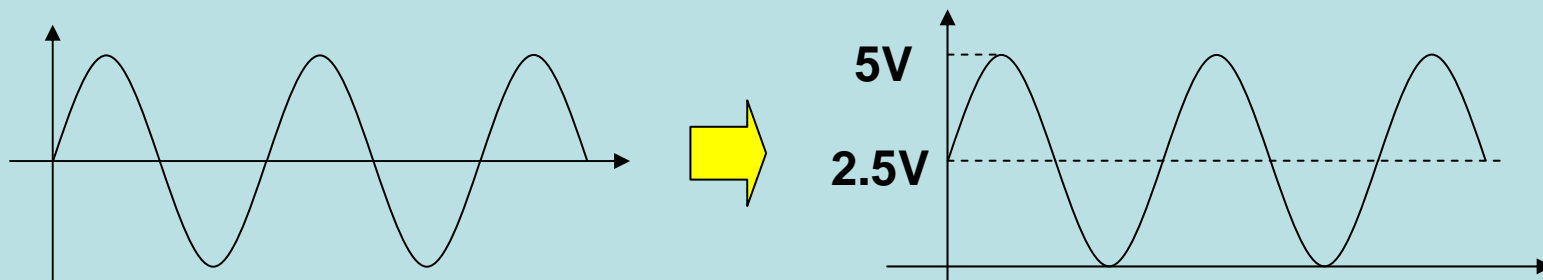
四级巴特沃兹**RC**有源滤波电路

普通运放 (如: **LM324**)

# 数字化语音存储与回放系统

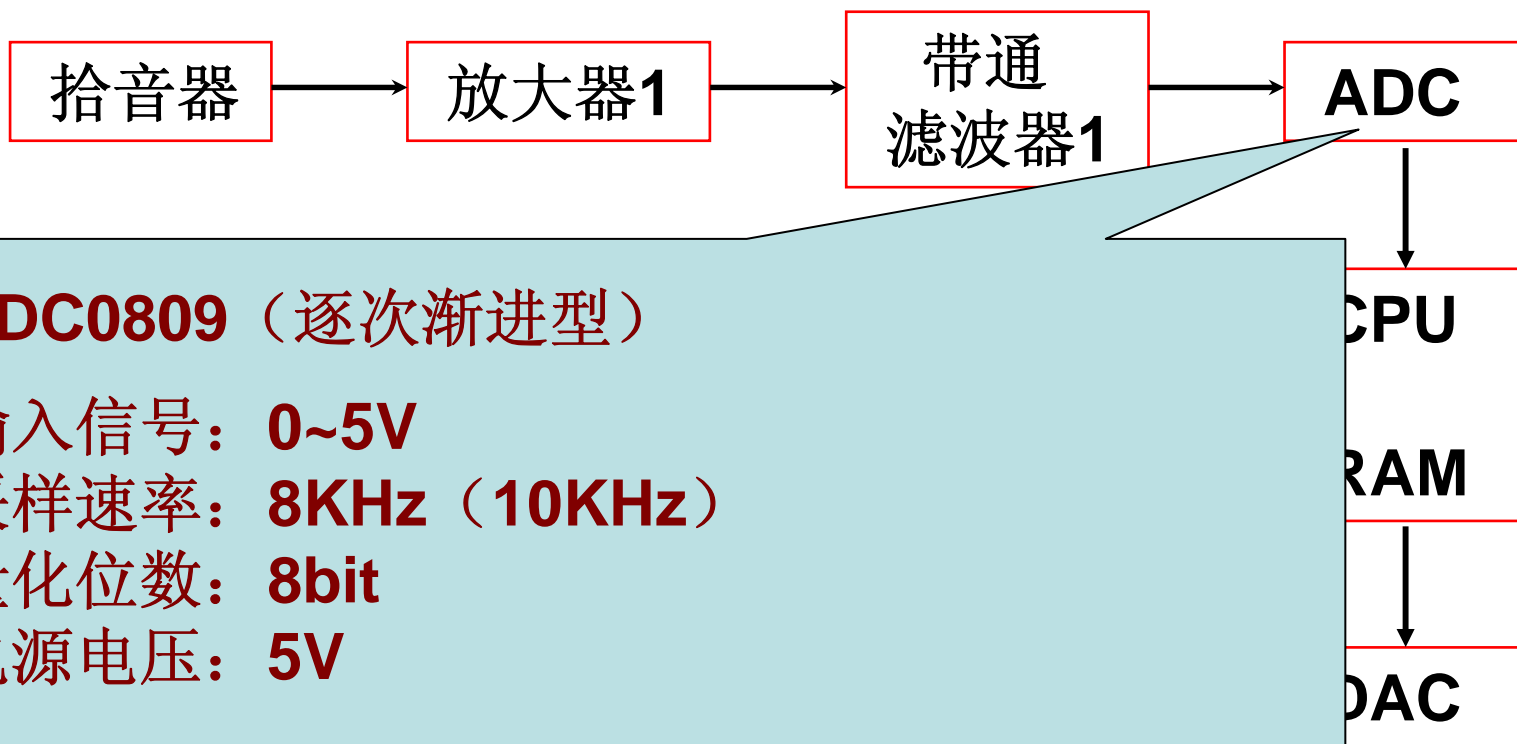


电平转换电路



运放加法器等电路

# 数字化语音存储与回放系统



# 数字化语音存储与回放系统

**CPU: 8031等**

**RAM: 32KB**

压缩编码（便于存储和传输）

**PCM : 4s**

**DPCM : 8s**

**ADPCM: 8s**

**DM : >8s**

**ADM : >8s**

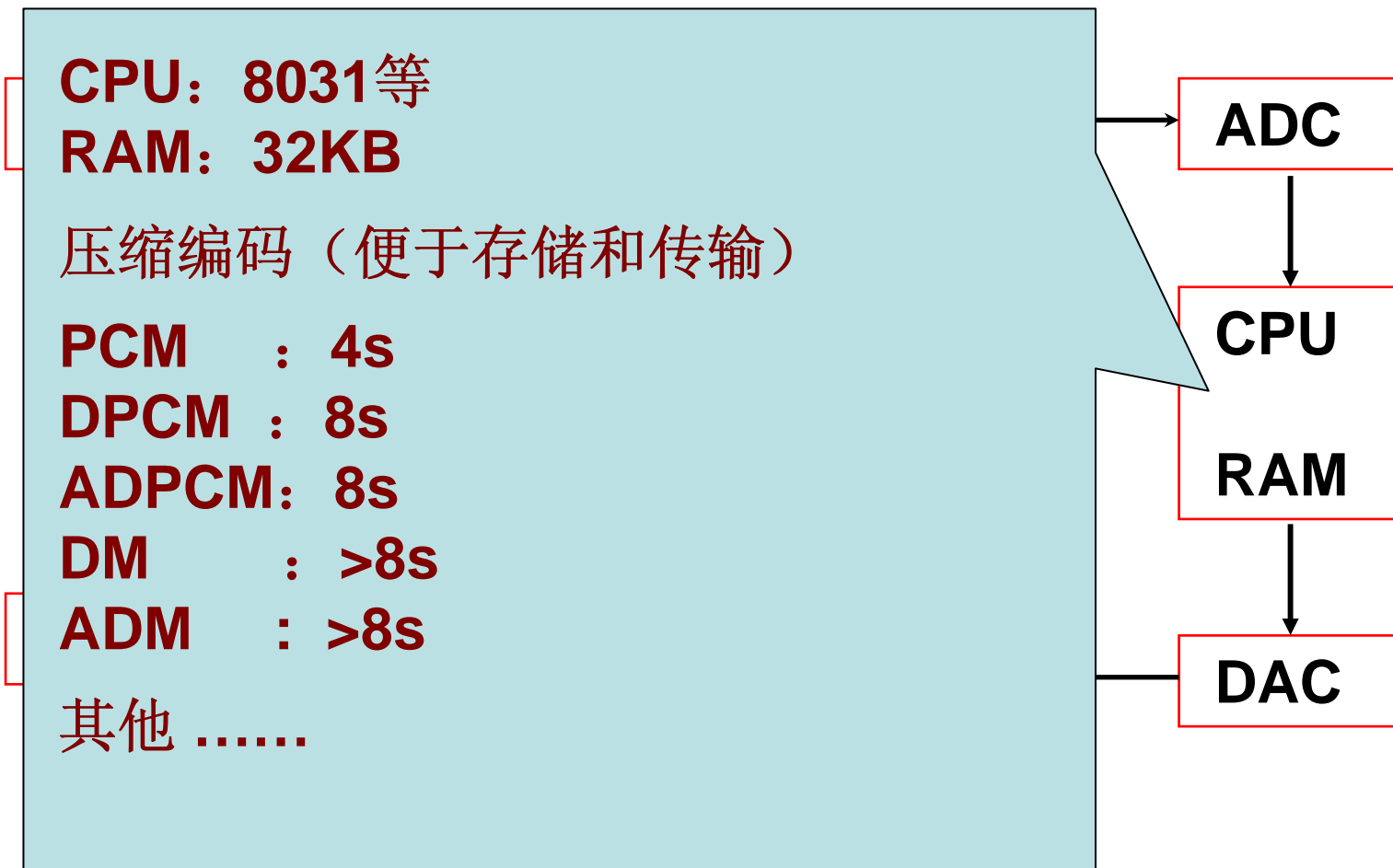
其他 .....

**ADC**

**CPU**

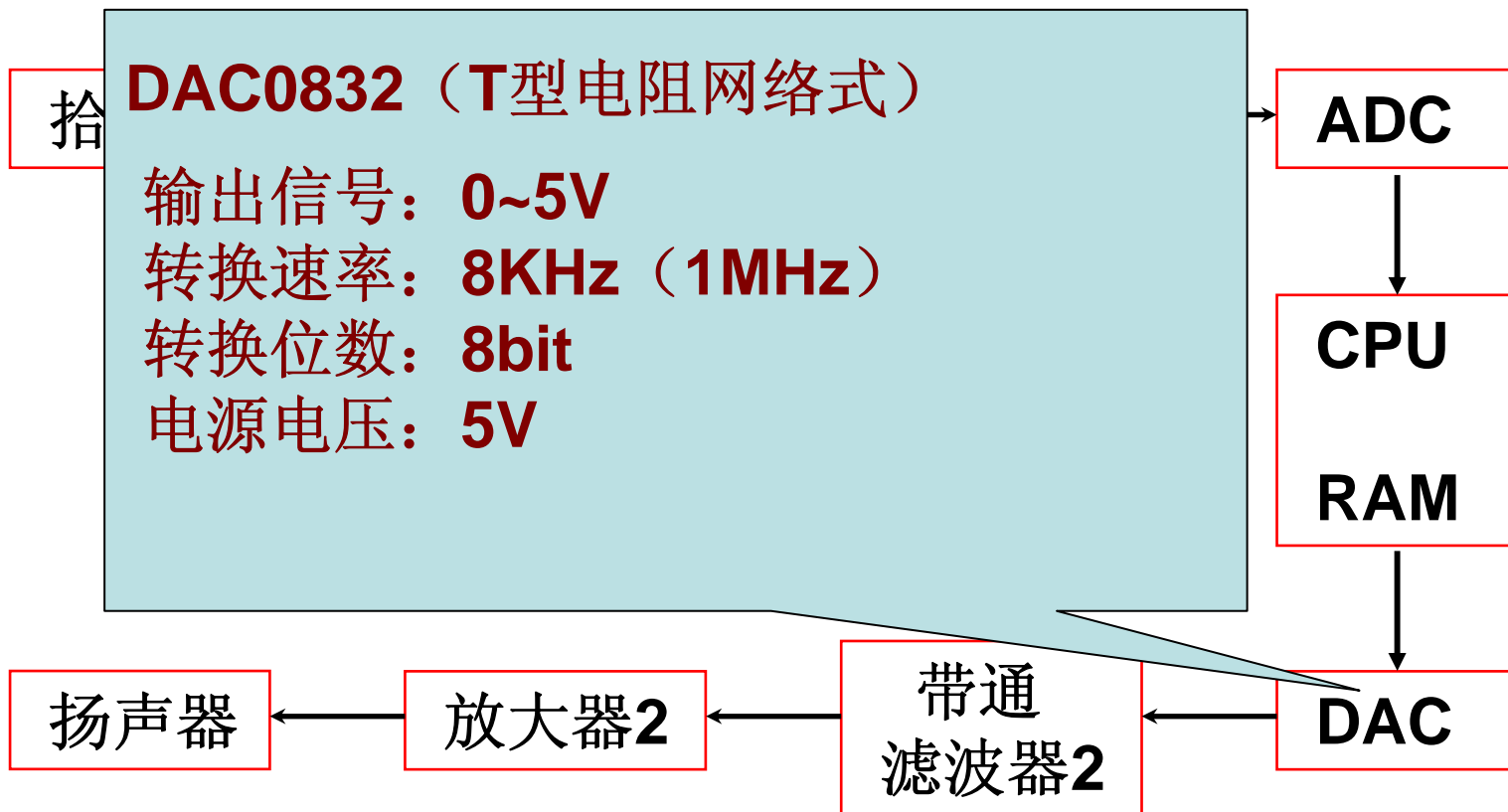
**RAM**

**DAC**

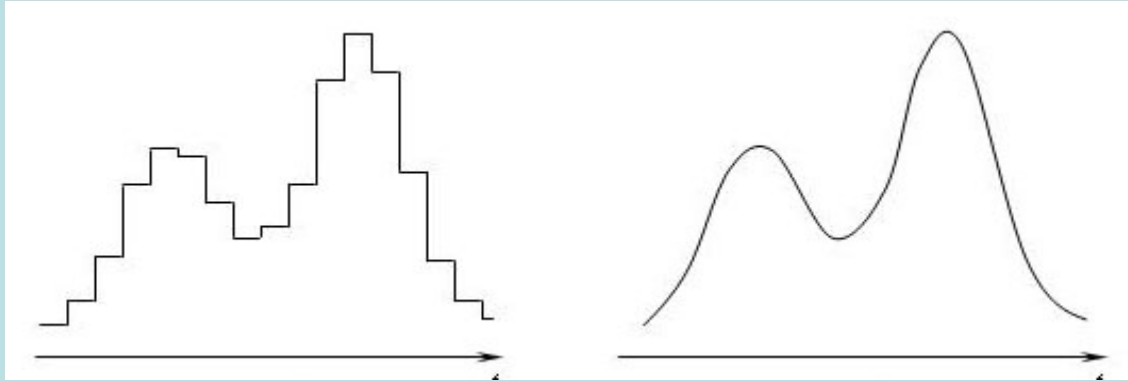




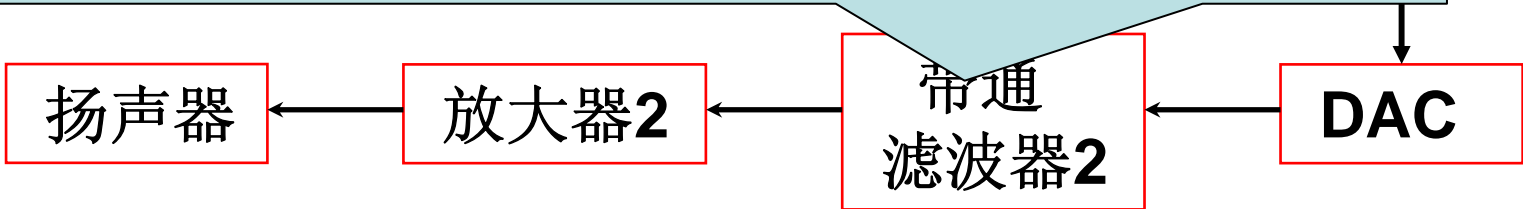
# 数字化语音存储与回放系统



## 低通平滑滤波器



低半截止频率：**3.4KHz**  
两级**RC**有源滤波电路  
电源电压：正负**12V**



# 数字化语音存储与回放系统

## 功率放大器

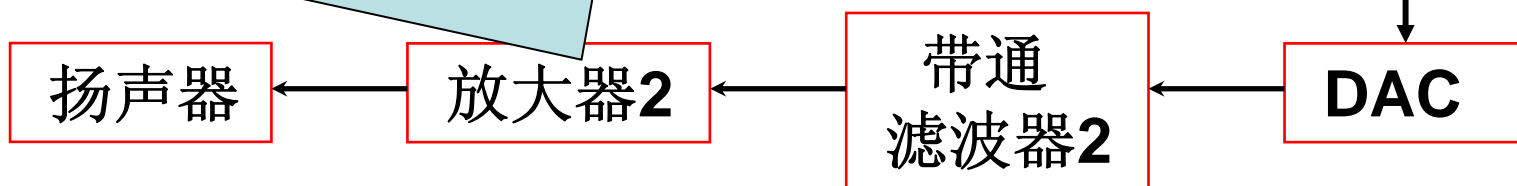
最大输出功率:  $\geq 0.5W$ , 可调

通带: 200Hz~4KHz

负载 (扬声器): 8 欧姆

OCL功率放大电路

LM386



# 数字化语音存储与回放系统

