

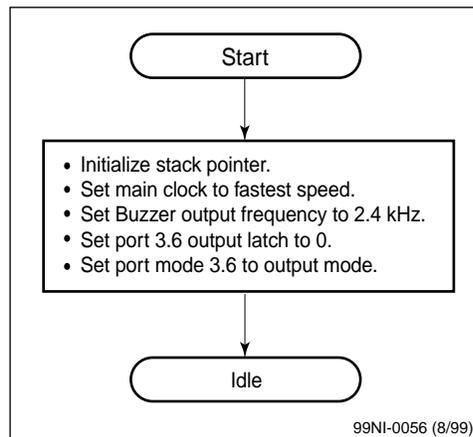
#### Description

The buzzer output control circuit outputs either 1.2-kHz, 2.4-kHz, 4.9-kHz or 9.8-kHz frequency square waves. This program outputs a 2.4-kHz buzzer frequency to pin BUZ/P36.

#### Program Specifications

- ❑ Fastest CPU clock setting: 2.4-kHz buzzer frequency
- ❑ Pins used in program: BUZ/P36: (outputs the buzzer frequency)

#### Flowchart



## Assembly Language Program

```

;*****
; Date:          08/05/1999
;
; Parameters: - fastest CPU clock
;              (fx = 5 MHz; 1 CPU clock cycle = 200 ns)
;              - Buzzer frequency is 2.4 kHz
;*****

;=====
;      specify Interrupt vectors      =
;=====

Res_Vec CSEG      AT 0000h           ; Set main program start vector.
        DW        Start

;*=====
;              Main Program          =
;=====

MAIN    CSEG
Start:  DI                ; Disable interrupts
        MOVW       AX, #0FE20h      ; Load SP address
        MOVW       SP, AX          ; Set Stack Pointer
        MOV        OSMS,#01h       ; Don't use scaler
        MOV        PCC, #00h       ; Main system clock at fastest setting
        MOV        TCL2,#0C0h      ; Select buzzer frequency to 2.4 kHz
        CLR1       P3.6            ; Set port 3.6 latch to 0
        CLR1       PM3.6          ; Set port 3.6 to output mode
Loop:   NOP
        BR         Loop           ; Endless Loop
        END

```

### C Language Program

```
/* *****  
; Date:          08/05/1999  
;  
; Parameters: - fastest CPU clock  
;              (fx = 5 MHz; 1 CPU clock cycle = 200ns)  
;              - Buzzer frequency is 2.4 khz  
; *****/  
  
/* extension functions in K0/K0S compiler */  
#pragma sfr      /* key word to allow SFR names in C code */  
  
/*=====  
;          Constants/Variables          =  
;=====*/  
  
#define TRUE     1  
#define FALSE    0  
  
/*=====  
;          Main Program                  =  
;=====*/  
  
void main(void)  
{  
    OSMS = 0x01;    /* Don't use scaler */  
    PCC = 0x00;    /* Main system clock at fastest setting */  
    TCL2 = 0xC0;   /* Select buzzer frequency = 2.4 kHz */  
    P3.6 = 0;      /* Set port 3.6 latch to 0 */  
    PM3.6 = 0;     /* Set port 3.6 to output mode */  
    while(TRUE);  /* Endless loop */  
}
```



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