

## 64240c series sample program

```

;ST7565P*2
CS2 EQU P1.5
CS1 EQU P1.4
RES EQU P1.3 ;RST=/RES
AO EQU P1.2 ;RS=AO
W_R EQU P1.1
R_D EQU P1.0
    ORG 0000H
    JMP BEGIN
    ORG 0003H
    JMP INTOO
    ORG 0013H
    JMP INTII
BEGIN: SETB EA
        SETB IT0
        SETB IT1
        CLR EX0
        CLR EX1
        CLR RES ;RST
        NOP
        lcall delay
        lcall delay

        SETB RES
        NOP
        SETB CS1
        SETB CS2
        lcall delay
        ;MOV A,#0E2H ;SOFTWARE RST
        ;LCALL WCOM
        MOV A,#00101111B ;POWER SETTING(VF=ON,VR=ON,VC=ON)
        LCALL WCOM1
        MOV A,#11111000B
        LCALL WCOM1
        MOV A,#00000000B
        LCALL WCOM1
        ;lcall wcom2
        MOV A,#0A2H ;MOV A,#0A2H ;BIAS SELECT =1/9
        LCALL WCOM1
        ;lcall wcom2
        MOV A,#10100000B ;ADC SELECT: SEGO TO SEG131
        LCALL WCOM1
        LCALL WCOM2
        MOV A,#11001000B ;SHL SELECT: COM63 TO COM0
        LCALL WCOM1
        LCALL WCOM2

        MOV A,#00100110B ;SET V0 VOLTAGE
        LCALL WCOM1
        MOV A,#10000001B ;ELECTRONIC VOLUME MODE SET
        LCALL WCOM1
        MOV A,#00110011B ;ELECTRONIC VOLUME REGISTER SET;
        MOV B,A
        LCALL WCOM1
        ;MOV R3,090H ;WRITE 00H TO DISPLAY DATA RAM
        ;LCALL TEST
        ;MOV A,#10101100B ;STATIC INDICATOR OFF
        ;LCALL WCOM

;MOV A,#11111000B
;LCALL WCOM
;MOV A,#00000000B
;LCALL WCOM
;LCALL DELAY
MOV A,#040H ;INITIAL DISPLAY LINE
LCALL WCOM1
LCALL WCOM2
MOV A,#0A6H ;NORMAL DISPLAY!!!!!!!!!!!!!!
LCALL WCOM1
LCALL WCOM2

START: MOV A,#0AFH ;DISPLAY ON
        LCALL WCOM1
        LCALL WCOM2
        MOV A,#10100101B ;DISPLAY ALL POINTS ON(TEST1)
        LCALL WCOM1
        LCALL WCOM2

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LCALL DELAY2
MOV A,#10100100B ;return normal
LCALL WCOM1
LCALL WCOM2

LCALL TEST2 ;TEST2(WRITE SQUARE)
LCALL DELAY2

MOV R3,#00H ;TSET3(WRITE COLUMN)
LCALL TEST
lcall delay2

MOV R3,#08H ;TEST4(WRITE CHECKER)
LCALL TEST
LCALL DELAY2

MOV A,#11001000B ;SHL SELECT: COM63 TO COM0
LCALL WCOM1
LCALL WCOM2
LCALL TEST5 ;TEST5(WRITE BIG CHAR)
LCALL DELAY2

MOV A,#10101110B ;DISPLAY OFF(TEST6)
LCALL WCOM1
LCALL WCOM2
LCALL DELAY2

LJMP START
INT00: PUSH ACC
MOV A,B
CJNE A,#00000000B,GO_DEC
JMP OUT_INT00
GO_DEC:DEC A
MOV B,A
MOV A,#10000001B
LCALL WCOM1
MOV A,B
LCALL WCOM1
OUT_INT00:POP ACC
RETI
INT11: PUSH ACC
MOV A,B
CJNE A,#00111111B,GO_INC
JMP OUT_INT11
GO_INC:INC A
MOV B,A
MOV A,#10000001B
LCALL WCOM1
MOV A,B
LCALL WCOM1
OUT_INT11:POP ACC
RETI

TEST:
DISP2: MOV R2,#0B0H
MOV A,R2 ;set page address
LCALL WCOM1
LCALL WCOM2
MOV A,#010H ;set column address MSB
LCALL WCOM1
LCALL WCOM2
mov a,#00h
;MOV A,#00H ;set column address LSB
LCALL WCOM1
LCALL WCOM2
DISP1: MOV R1,#15 ;set (8*8)*16characters
MOV DPTR,#CHAR

DISP0: MOV R0,#8
MOV A,R3
MOVC A,@A+DPTR
LCALL WDATA1
LCALL WDATA2

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INC      DPTR
DJNZ    R0,DISP0
DJNZ    R1,DISP1
INC     R2
CJNE   R2,#0B8H,DISP2
RET
TEST2:  MOV     A,#10110000B
        LCALL  WCOM1
        LCALL  WCOM2
        MOV     A,#00010000B
        LCALL  WCOM1
        LCALL  WCOM2
        MOV     A,#00000000B
        LCALL  WCOM1
        LCALL  WCOM2
        MOV     A,#11111111B
        LCALL  WDATA1
        MOV     A,#00000001B
        LCALL  LOOP1
        MOV     A,#00000001B
        LCALL  LOOP2
        MOV     A,#11111111B
        LCALL  WDATA2
        MOV     A,#10110001B
        MOV     R5,A
        LCALL  WCOM1
        LCALL  WCOM2
        MOV     A,#00010000B
        LCALL  WCOM1
        LCALL  WCOM2
        MOV     A,#00000000B
        LCALL  WCOM1
        LCALL  WCOM2
TEST2_1: MOV     R6,#6
        MOV     A,#11111111B
        LCALL  WDATA1
        MOV     A,#00000000B
        LCALL  LOOP1
        MOV     A,#00000000B
        LCALL  LOOP2
        MOV     A,#11111111B
        LCALL  WDATA2
        INC     R5
        MOV     A,R5
        LCALL  WCOM1
        LCALL  WCOM2
        MOV     A,#00010000B
        LCALL  WCOM1
        LCALL  WCOM2
        MOV     A,#00000000B
        LCALL  WCOM1
        LCALL  WCOM2
        DJNZ   R6,TEST2_1
        MOV     A,#10110111B
        LCALL  WCOM1
        LCALL  WCOM2
        MOV     A,#00010000B
        LCALL  WCOM1
        LCALL  WCOM2
        MOV     A,#00000000B
        LCALL  WCOM1
        LCALL  WCOM2
        MOV     A,#11111111B
        LCALL  WDATA1
        MOV     A,#10000000B
        LCALL  LOOP1
        MOV     A,#10000000B
        LCALL  LOOP2
        MOV     A,#11111111B
        LCALL  WDATA2
        RET
TEST5:  MOV     A,#10110000B
        MOV     R5,A
        LCALL  WCOM1
        LCALL  WCOM2
        MOV     A,#00010000B
        LCALL  WCOM1

```

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        LCALL    WCOM2
        MOV     A,#00000000B
        LCALL    WCOM1
        LCALL    WCOM2
        MOV     R7,#4
TEST5_1: MOV R6,  #2
        MOV DPTR,#BIG_CHAR
TEST5_2: MOV R3,#120
        TEST5_2_1: MOV A,#0
                MOVC  A,@A+DPTR
                LCALL  WDATA1
                INC DPTR
                DJNZ  R3,TEST5_2_1
                MOV R3,#120
        TEST5_2_2: MOV A,#0
                MOVC  A,@A+DPTR
                LCALL  WDATA2
                INC DPTR
                DJNZ  R3,TEST5_2_2
                INC  R5
                MOV  A,R5
                LCALL WCOM1
                LCALL WCOM2
                MOV  A,#00010000B
                LCALL WCOM1
                LCALL WCOM2
                MOV  A,#00000000B
                LCALL WCOM1
                LCALL WCOM2
                DJNZ  R6,TEST5_2
                DJNZ  R7,TEST5_1
                RET
LOOP1:   MOV R7,#119
        LOOP1_1: ;PUSH ACC
                LCALL WDATA1
                ;POP ACC
                DJNZ R7,LOOP1_1
                RET
        LOOP2:   MOV R7,#119
        LOOP2_1: ;PUSH ACC
                LCALL WDATA2
                ;POP ACC
                DJNZ R7,LOOP2_1
                RET
DELAY:  MOV     40H,#032H          ;10.05ms
DEL1:   MOV     41H,#030H
DEL2:   DJNZ   41H,DEL2          ;192us
        DJNZ   40H,DEL1
        RET

DELAY2: SETB EX0
        SETB EX1
        LCALL  DELAY4
        MOV   40H,#15
DEL21:  MOV   41H,#250
DEL22:  MOV   42H,#80
DEL23:  ;MOV C,P2.0
        JB P2.0,KDL
        LCALL  DELAY4
CHECK_KEY: NOP
        NOP
        ;MOV C,P2.0
        JNB P2.0,BREAK1
        JMP  CHECK_KEY
        KDL:  DJNZ  42H,DEL23
        DJNZ  41H,DEL22
        DJNZ  40H,DEL21
        BREAK1: CLR EX0
                CLR EX1
                RET
DELAY4: MOV   43h,#4
DEL41:  MOV   44h,#250
DEL42:  MOV   45h,#200
DEL43:  DJNZ  45h,DEL43
        DJNZ  44h,DEL42
        DJNZ  43h,DEL41
        RET
WCOM1:  PUSH ACC

```

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```

;SETB CS2
CLR CS1
CLR W_R
CLR A0
MOV P0,A
NOP
SETB R_D
NOP
CLR R_D
NOP
SETB CS1
POP ACC
RET
WCOM2:  PUSH ACC
;SETB CS1
CLR CS2
CLR W_R
CLR A0
MOV P0,A
NOP
SETB R_D
NOP
CLR R_D
NOP
SETB CS2
POP ACC
RET
WDATA1: PUSH ACC
CLR CS1
CLR W_R
SETB A0
MOV P0,A
NOP
SETB R_D
NOP
CLR R_D
NOP
SETB CS1
POP ACC
RET
WDATA2: PUSH ACC
;SETB CS1
CLR CS2
CLR W_R
SETB A0
MOV P0,A
NOP
SETB R_D
NOP
CLR R_D
NOP
SETB CS2
POP ACC
RET

```

CHAR:

```

DB      0FFH,000H,0FFH,000H,0FFH,000H,0FFH,000H
DB      0F0H,0F0H,0F0H,0F0H,00FH,00FH,00FH,00FH
DB      000H,000H,000H,000H,000H,000H,000H,000H

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BIG\_CHAR:

```

DB      000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H
DB      000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H
DB      000H,000H,000H,000H,002H,0FEH,0FEH,002H,002H,006H,01CH,0F8H,0E0H,000H,000H,000H
DB      040H,046H,0C6H,0C6H,000H,000H,000H,000H,000H,000H,000H,080H,0C0H,040H,040H,040H
DB      0C0H,0C0H,000H,000H,000H,040H,0C0H,0C0H,0C0H,040H,040H,0C0H,080H,000H,000H,000H
DB      000H,002H,002H,0FEH,0FEH,000H,000H,000H,000H,000H,000H,080H,0C0H,040H,040H,040H
DB      040H,0C0H,080H,000H,000H,000H,040H,0C0H,0C0H,040H,040H,040H,0C0H,0C0H,040H,000H
DB      000H,040H,040H,0F8H,0F8H,040H,040H,000H,000H,000H,000H,000H,000H,080H,0C0H,040H
DB      040H,0C0H,080H,000H,000H,000H,000H,080H,0C0H,040H,040H,0C0H,080H,000H,000H,000H
DB      000H,000H,002H,0FEH,0FEH,0C0H,040H,040H,0C0H,080H,000H,000H,000H,000H,000H,000H
DB      000H,000H,000H,000H,000H,000H,000H,000H,002H,0FEH,0FEH,002H,000H,000H,000H,000H
DB      000H,000H,000H,040H,040H,0F8H,0F8H,040H,040H,000H,000H,000H,000H,000H,000H,080H
DB      0C0H,040H,040H,0C2H,0FEH,0FEH,000H,000H,000H,080H,000H,000H,000H,000H,000H,000H
DB      000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H
DB      000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H
DB      000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H
DB      000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H
DB      000H,000H,000H,000H,020H,03FH,03FH,020H,020H,030H,01CH,00FH,003H,000H,000H,000H

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```
DB 020H,020H,03FH,03FH,020H,020H,000H,000H,000H,000H,000H,039H,03BH,022H,026H,024H
DB 03DH,019H,000H,000H,000H,080H,0FFH,0FFH,0B0H,020H,020H,030H,01FH,00FH,000H,000H
DB 000H,020H,020H,03FH,03FH,020H,020H,000H,000H,000H,000H,019H,03DH,024H,026H,022H
DB 022H,03FH,03FH,030H,030H,000H,000H,080H,087H,0FFH,07CH,00FH,003H,000H,000H,000H
DB 000H,000H,000H,01FH,03FH,020H,030H,010H,000H,000H,000H,000H,00FH,01FH,032H,022H
DB 022H,032H,01BH,00BH,000H,000H,000H,00FH,01FH,030H,020H,020H,031H,019H,008H,000H
DB 000H,000H,020H,03FH,03FH,020H,000H,020H,03FH,03FH,020H,000H,000H,000H,000H,000H
DB 000H,000H,000H,000H,000H,000H,000H,000H,020H,03FH,03FH,020H,020H,020H,020H,038H
DB 018H,000H,000H,000H,000H,01FH,03FH,020H,030H,010H,000H,000H,000H,000H,00FH,01FH
DB 030H,020H,020H,030H,03FH,03FH,020H,000H,000H,000H,000H,000H,000H,000H,000H,000H
DB 000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H
DB 000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H
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END