

64128k_l_m_n series sample program (contrast change)

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;ST7565P*1
CS1 EQU P1.0
AO EQU P1.2 ;RST=/RES
RES EQU P1.1 ;RS=AO
W_R EQU P1.3
R_D EQU P1.4
    ORG 0000H
    JMP BEGIN
    ORG 0003H
    JMP INTOO
    ORG 0013H
    JMP INTII
BEGIN: SETB ITO
      SETB IT1
      SETB EA
      CLR EX0
      CLR EX1
      MOV B,#11011001B

          LCALL INTI
          lcall delay4

          ;lcall wcom2

START: MOV A,#0AFH ;DISPLAY ON
      LCALL WCOM
      MOV A,#10100101B ;DISPLAY ALL POINTS ON(TEST1)
      LCALL WCOM
      MOV 40H,#15
      LCALL DELAY2
      ;LCALL DELAY4
      ;
      WAIT: JMP WAIT
      MOV A,#10100100B ;return normal
      LCALL WCOM
      ;LCALL DELAY2

      ;MOV A,#040H ;INITIAL DISPLAY LINE
      ;LCALL WCOM
      LCALL TEST2 ;TEST2(WRITE SQUARE)
      ;MOV A,#0AFH ;DISPLAY ON
      ;LCALL WCOM
      MOV 40H,#15
      LCALL DELAY2
      ;LCALL DELAY4

      ;MOV A,#040H ;INITIAL DISPLAY LINE
      ;LCALL WCOM
      MOV R3,#00H ;TSET3(WRITE COLUMN)
      LCALL TEST
      MOV 40H,#15
      lcall delay2
      ;LCALL DELAY4

      MOV R3,#08H ;TEST4(WRITE CHECKER)
      LCALL TEST
      MOV 40H,#15
      LCALL DELAY2
      ;LCALL DELAY4

      ;MOV A,#10000001B ;ELECTRONIC VOLUME MODE SET
      ;LCALL WCOM
      ;MOV A,#11010101B ;ELECTRONIC VOLUME REGISTER SET;
      ;LCALL WCOM
      LCALL TEST5 ;TEST5(WRITE BIG CHAR)
      ;MOV A,#0AFH ;DISPLAY ON
      ;LCALL WCOM
      MOV 40H,#30
      LCALL DELAY2

      ;MOV A,#10000001B ;ELECTRONIC VOLUME MODE SET
      ;LCALL WCOM
      ;MOV A,B ;ELECTRONIC VOLUME REGISTER SET;
      ;LCALL WCOM
      MOV A,#10101110B ;DISPLAY OFF(TEST6)
      LCALL WCOM

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MOV 40H,#15
LCALL DELAY2
;LCALL DELAY4
;WAIT:JMP WAIT
LJMP START

INTI:
LCALL DELAY
LCALL DELAY
CLR RES ;RST
NOP
lcall delay
;lcall delay

SETB RES
NOP
lcall delay
;MOV A,#0E2H ;SOFTWARE RST
;LCALL WCOM
MOV A,#0A2H ;MOV A,#0A2H ;BIAS SELECT =1/9
LCALL WCOM
;lcall wcom2
MOV A,#1010000B ;ADC SELECT: SEG0 TO SEG131
LCALL WCOM
MOV A,#11001000B ;SHL SELECT: COM63 TO COM0
LCALL WCOM

MOV A,#00100101B ;SET V0 VOLTAGE
LCALL WCOM
MOV A,#10000001B ;ELECTRONIC VOLUME MODE SET
LCALL WCOM
MOV A,B ;ELECTRONIC VOLUME REGISTER SET;
LCALL WCOM
MOV A,#11111000B ;SET BOOSTER RATIO=4X
LCALL WCOM
MOV A,#00000000B
LCALL WCOM
MOV A,#00101111B ;POWER SETTING(VF=ON,VR=ON,VC=ON)
LCALL WCOM
;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 WCOM
MOV A,#0A6H ;NORMAL DISPLAY!!!!!!!!!!!!!!
LCALL WCOM
RET
INTOO: PUSH ACC
MOV A,B
CJNE A,#11000000B,GO_DEC
JMP OUT_INTOO
GO_DEC:DEC A
MOV B,A
MOV A,#10000001B
LCALL WCOM
MOV A,B
LCALL WCOM
OUT_INTOO:POP ACC
RETI
INTII: PUSH ACC
MOV A,B
CJNE A,#11111111B,GO_INC
JMP OUT_INTII
GO_INC:INC A
MOV B,A
MOV A,#10000001B
LCALL WCOM
MOV A,B
LCALL WCOM
OUT_INTII:POP ACC

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RETI

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

DISP0:  MOV    R0,#8
        MOV    A,R3
        MOVC   A,@A+DPTR
        LCALL  WDATA
        INC    DPTR
        DJNZ   R0,DISP0
        DJNZ   R1,DISP1
        INC    R2
        CJNE   R2,#0B8H,DISP2
        RET

TEST2:  MOV    A,#10110000B
        LCALL  WCOM
        MOV    A,#00010000B
        LCALL  WCOM
        MOV    A,#00000000B
        LCALL  WCOM
        MOV    A,#11111111B
        LCALL  WDATA
        MOV    A,#00000001B
        LCALL  LOOP1
        MOV    A,#11111111B
        LCALL  WDATA
        MOV    A,#10110001B
        MOV    R5,A
        LCALL  WCOM
        MOV    A,#00010000B
        LCALL  WCOM
        MOV    A,#00000000B
        LCALL  WCOM
        MOV    R6,#6
TEST2_1: MOV    A,#11111111B
        LCALL  WDATA
        MOV    A,#00000000B
        LCALL  LOOP1
        MOV    A,#11111111B
        LCALL  WDATA
        INC    R5
        MOV    A,R5
        LCALL  WCOM
        MOV    A,#00010000B
        LCALL  WCOM
        MOV    A,#00000000B
        LCALL  WCOM
        DJNZ   R6,TEST2_1
        MOV    A,#10110111B
        LCALL  WCOM
        MOV    A,#00010000B
        LCALL  WCOM
        MOV    A,#00000000B
        LCALL  WCOM
        MOV    A,#11111111B
        LCALL  WDATA
        MOV    A,#10000000B
        LCALL  LOOP1
        MOV    A,#11111111B
        LCALL  WDATA
        RET

TEST5:  MOV    A,#10110000B
        MOV    R5,A
        MOV    R7,#4
TEST5_1: MOV R6, #2

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TEST5_2:  MOV DPTR,#BIG_CHAR
          MOV  A,R5
          LCALL WCOM
          MOV  A,#00010000B
          LCALL WCOM
          MOV  A,#00000000B
          LCALL WCOM
          MOV R3,#128
TEST5_2_1:
          MOV A,#0
          MOVC A,@A+DPTR
          LCALL WDATA
          INC DPTR
          DJNZ R3,TEST5_2_1
          INC R5
          DJNZ R6,TEST5_2
          DJNZ R7,TEST5_1
          RET
LOOP1:   MOV R7,#126
LOOP1_1: PUSH ACC
          LCALL WDATA
          POP ACC
          DJNZ R7,LOOP1_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 P1.7,KDL
        LCALL DELAY4
CHECK_KEY: NOP
        NOP
        ;MOV C,P2.0
        JNB P1.7,BREAK1
        JMP CHECK_KEY
KDL:   DJNZ 42H,DEL23
        DJNZ 41H,DEL22
        DJNZ 40H,DEL21
BREAK1: CLR EX0
        CLR EX1
        RET
DELAY3: MOV R1,#25
DEL31:  MOV R2,#50
DEL32:  DJNZ R2,DEL32
        DJNZ R1,DEL31
        RET
DELAY4: MOV 43h,#4
DEL41:  MOV 44h,#250
DEL42:  MOV 45h,#200
DEL43:  DJNZ 45h,DEL43
        DJNZ 44h,DEL42
        DJNZ 43h,DEL41
        RET
WCOM:   PUSH ACC
        CLR CS1
        CLR A0
        CLR W_R
        NOP
        MOV P2,A
        NOP
        SETB R_D
        NOP
        CLR R_D
        NOP
        POP ACC
        RET
WDATA:  PUSH ACC
        CLR CS1

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SETB A0
CLR W_R
NOP
MOV P2,A
NOP
SETB R_D
NOP
CLR R_D
NOP
POP ACC
RET

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CHAR:

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DB      0FFH,000H,0FFH,000H,0FFH,000H,0FFH,000H
;DB     080H,040H,020H,010H,008H,004H,002H,001H
DB      055H,0AAH,055H,0AAH,055H,0AAH,055H,0AAH
DB      000H,000H,000H,000H,000H,000H,000H,000H

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BIG_CHAR:

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DB      004H,004H,0FCH,0FCH,004H,004H,004H,004H,00CH,018H,0F0H,0E0H,000H,004H,004H,0FCH
DB      0FCH,004H,004H,000H,030H,078H,0CCH,0C4H,084H,084H,008H,03CH,000H,000H,004H,004H
DB      0FCH,0FCH,004H,004H,004H,08CH,0F8H,070H,000H,004H,004H,0FCH,0FCH,004H,004H,000H
DB      000H,000H,000H,000H,000H,000H,000H,000H,0C0H,030H,00CH,07CH,0F0H,080H,000H,000H
DB      000H,004H,004H,00CH,01CH,074H,0E4H,080H,000H,080H,064H,014H,00CH,004H,01CH,00CH
DB      004H,004H,004H,0FCH,0FCH,004H,004H,004H,00CH,01CH,004H,004H,0FCH,0FCH,084H,084H
DB      084H,0E4H,004H,01CH,000H,000H,0C0H,0F0H,018H,008H,004H,004H,004H,004H,008H,008H
DB      03CH,000H,004H,004H,0FCH,0FCH,084H,084H,080H,084H,084H,0FCH,0FCH,004H,004H,000H
DB      020H,020H,03FH,03FH,020H,020H,020H,020H,010H,018H,00FH,007H,000H,020H,020H,03FH
DB      03FH,020H,020H,000H,03CH,018H,010H,020H,021H,021H,033H,01FH,00EH,000H,020H,020H
DB      03FH,03FH,021H,021H,001H,001H,000H,000H,000H,020H,020H,03FH,03FH,020H,020H,020H
DB      020H,020H,030H,00CH,020H,030H,038H,027H,002H,002H,002H,002H,023H,03FH,03CH,030H
DB      020H,000H,000H,000H,000H,020H,020H,03FH,03FH,020H,020H,000H,000H,000H,000H,000H
DB      000H,020H,020H,03FH,03FH,020H,020H,000H,000H,000H,020H,020H,03FH,03FH,020H,020H
DB      020H,023H,020H,030H,008H,000H,007H,00FH,018H,030H,020H,020H,020H,020H,010H,010H
DB      008H,000H,020H,020H,03FH,03FH,020H,020H,000H,020H,020H,03FH,03FH,020H,020H,000H

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BIG_CHAR2:

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DB      010H,010H,0F0H,0F0H,010H,010H,010H,010H,030H,060H,0C0H,080H,000H,010H,010H,0F0H
DB      0F0H,010H,010H,000H,0C0H,0E0H,030H,010H,010H,010H,020H,0F0H,000H,000H,010H,010H
DB      0F0H,0F0H,010H,010H,010H,030H,0E0H,0C0H,000H,010H,010H,0F0H,0F0H,010H,010H,000H
DB      000H,000H,000H,000H,000H,000H,000H,000H,0C0H,030H,0F0H,0C0H,000H,000H,000H,000H
DB      000H,010H,010H,030H,070H,0D0H,090H,000H,000H,000H,090H,050H,030H,010H,070H,030H
DB      010H,010H,010H,0F0H,0F0H,010H,010H,010H,030H,070H,010H,010H,0F0H,0F0H,010H,010H
DB      010H,090H,010H,070H,000H,000H,000H,0C0H,060H,020H,010H,010H,010H,010H,020H,020H
DB      0F0H,000H,010H,010H,0F0H,0F0H,010H,010H,000H,010H,010H,0F0H,0F0H,010H,010H,000H
DB      080H,080H,0FFH,0FFH,080H,080H,080H,080H,040H,060H,03FH,01FH,000H,080H,080H,0FFH
DB      0FFH,080H,080H,000H,0F0H,061H,043H,083H,086H,086H,0CCH,07CH,038H,000H,080H,080H
DB      0FFH,0FFH,084H,084H,004H,006H,003H,001H,000H,080H,080H,0FFH,0FFH,080H,080H,080H
DB      080H,080H,0C0H,030H,080H,0C0H,0E0H,09CH,00BH,008H,008H,009H,08FH,0FEH,0F0H,0C0H
DB      080H,000H,000H,000H,000H,081H,083H,0FEH,0FCH,082H,081H,000H,000H,000H,000H,000H
DB      000H,080H,080H,0FFH,0FFH,080H,080H,000H,000H,000H,080H,080H,0FFH,0FFH,082H,082H
DB      082H,08FH,080H,0C0H,020H,000H,01FH,03FH,060H,0C0H,080H,080H,080H,080H,080H,040H
DB      020H,000H,080H,080H,0FFH,0FFH,082H,082H,002H,082H,082H,0FFH,0FFH,080H,080H,000H

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END