



1621

```
*****  
*****  
;1621    LCD  
*****  
#INCLUDE  CMS69F628.H  
  
WR_1621      EQU    PORTA, 0      ;1621  
DATA_1621    EQU    PORTA, 1      ;1621  
CS_1621      EQU    PORTA, 2      ;1621  
  
DATA_INC     EQU    ?             ;  
COMMAND_ADD  EQU    ?             ;    /  
FLAG         EQU    ?             ;  
  
TEMP         EQU    ?             ;  
COUNT       EQU    ?             ;  
  
*****  
*****  
;1621  
*****  
LCD_DRIVE:  
ONOFF_COMMAND:           ;  
  
;    LDIA          B' 00000000'    ;SYS    DIS
```



```
LDIA      B' 00000001'      ;SYS  EN
CALL      ST_COMMAND_COM

OSC_CHO:      ;          rc  xt  extclk
; LDIA      B' 00010100'      ;EXT XT
LDIA      B' 00011000'      ;INT RC 256K
; LDIA      B' 00011100'      ;EXT CLK 256K
CALL      ST_COMMAND_COM

BIAS_COM_CHO:      ;BIAS/COM
LDIA      B' 00100000'      ;BIAS 1/2 2COM
; LDIA      B' 00100100'      ;BIAS 1/2 3COM
; LDIA      B' 00101000'      ;BIAS 1/2 4COM
; LDIA      B' 00100001'      ;BIAS 1/3 2COM
; LDIA      B' 00100101'      ;BIAS 1/3 3COM
; LDIA      B' 00101001'      ;BIAS 1/3 4COM
CALL      ST_COMMAND_COM

BELL_HZ:      ;
LDIA      B' 01100000'      ;TONE 2K
; LDIA      B' 01000000'      ;TONE 4K
CALL      ST_COMMAND_COM

BELL_ONOFF:      ;
LDIA      B' 00001001'      ;TONE ON
; LDIA      B' 00001000'      ;TONE OFF
CALL      ST_COMMAND_COM

CLR_COMMAND:      ;      wdt      timer
;      wdt      timer      wdt
timer
LDIA      B' 00001110'      ;CLR  WDT
; LDIA      B' 00001100'      ;CLR  TIMER
CALL      ST_COMMAND_COM
```



```
WORK_CHO:                                ;WDT  TIMER
    LDIA    B' 00000111'                ;WDT EN
;    LDIA    B' 00000110'                ;TIMER EN
;    LDIA    B' 00000101'                ;WDT DIS
;    LDIA    B' 00000100'                ;TIMER DIS
    CALL    ST_COMMAND_COM

FRE_CHO:                                  ;
    LDIA    B' 10100000'                ;F1
;    LDIA    B' 10100001'                ;F2
;    LDIA    B' 10100010'                ;F4
;    LDIA    B' 10100011'                ;F8
;    LDIA    B' 10100100'                ;F16
;    LDIA    B' 10100101'                ;F32
;    LDIA    B' 10100110'                ;F64
;    LDIA    B' 10100111'                ;F128
    CALL    ST_COMMAND_COM

WORK_ALLOW:                               ;WDT  TIMER
;    LDIA    B' 10000000'                ;IRQ  DIS
    LDIA    B' 10001000'                ;IRQ  EN
    CALL    ST_COMMAND_COM

WORK_START:                               ;                1621
;    LDIA    B' 00000010'                ;LCD OFF
    LDIA    B' 00000011'                ;LCD ON
    CALL    ST_COMMAND_COM

DISP_ON:                                  ;WRITE DATA
    CLR     COMMAND_ADD

DISP_LOOP:
    LDIA    01FH
    ANDA   COMMAND_ADD
```



```
ADDIA    TAB_DATA$L
LD       TABLE_SPL, A
LDIA    TAB_DATA$H
SZB     STATUS, C
ADDIA    . 1
LD       TABLE_SPH, A
TABLE   DATA_INC      ;
CLRB    FLAG, 0      ;
CALL    LCD_DRIVE_COM

INCR    COMMAND_ADD    ;      +1
LDIA    . 32
SUBA    COMMAND_ADD
SNZB    STATUS, C
JP      DISP_LOOP
RET

;*****
ST_COMMAND_COM:
    LD    COMMAND_ADD, A
    SETB  FLAG, 0      ;
;-----
LCD_DRIVE_COM:
    CLRB  CS_1621
    LDIA  B' 10100000'
    SZB   FLAG, 0      ;=1--->COMMAND, =0--->WRITE
    LDIA  B' 10000000'
    LD    TEMP, A
    LDIA  D' 3'
    LD    COUNT, A
```



```
CALL        SEND_1621

;-----

LDIA       D' 6'          ;
SZB        FLAG, 0
LDIA       D' 9'
LD         COUNT, A
LD         A, COMMAND_ADD
LD         TEMP, A
CALL       SEND_1621

;-----

SZB        FLAG, 0          ;
JP         LCD_DRIVE_BACK
LD         A, DATA_INC
LD         TEMP, A
LDIA      D' 4'
LD         COUNT, A
CALL       SEND_1621

LCD_DRIVE_BACK:
SETB      CS_1621
RET

;*****

SEND_1621:          ;
RLCR      TEMP
CLRB      DATA_1621
SZB       STATUS, C
SETB      DATA_1621
CLRB      WR_1621
SETB      WR_1621
SZDECR    COUNT
```




DW	0FH	
DW	0FH	;addr31
