

PIC Macros... another set... just what the internet needs.

Yet another list of PIC macros. These are ones I use a lot that make RISC assembler a bit easier (rolls eyes).

I use these all the time in my code so if you take anything from this section, you'll probably need these too. They just add some nice functionality like compare and skips. Also emulates some later opcodes e.g MOVFF

```
; common macros
; a lot of these bring Z80-like "opcodes"
; which makes code much more readable (RISC opcodes can be horrible)
;
    NOLIST

; a two cycle NOP with only a single word
NOOP    MACRO
        GOTO    $+1
    ENDM

; compare register with value. trashes W, Zflag set if values are the same
CP      MACRO    REGF,VAL
        MOVLW    VAL
        SUBWF    REGF,W
    ENDM

;set carry flag
SCF     MACRO
        BSF      STATUS,C
    ENDM

;clear carry flag
CCF     MACRO
        BCF      STATUS,C
    ENDM

;set zero flag
SZF     MACRO
        BSF      STATUS,Z
    ENDM

;clear zero flag
CZF     MACRO
        BCF      STATUS,Z
    ENDM

;move literal to file register - trashes W
MOVLFF  MACRO    LITERAL,REG
```

```
        MOVLW    LITERAL
        MOVWF    REG
    ENDM

;move file to file - trashes W
MOVFF    MACRO    REGSRC,REGDEST
    MOVFW    REGSRC
    MOVWF    REGDEST
    ENDM

;bitwise shortcuts just a bit clearer than bcf & bsf
; set a pin Lo
LO        MACRO    REGX,BITY
    BCF      REGX,BITY
    ENDM

;set a pin Hi
HI        MACRO    REGX,BITY
    BSF      REGX,BITY
    ENDM

; pulse a pin, don't care how long, just want the edges
HIPULSE  MACRO    REGX,BITY
    BSF      REGX,BITY
    BCF      REGX,BITY
    ENDM

LOPULSE  MACRO    REGX,BITY
    BCF      REGX,BITY
    BSF      REGX,BITY
    ENDM

; program flow conditionals
; skip the next instruction on specific conditions

; bit in register
SKIPHI   MACRO    REGX,BITY
    BTFSS    REGX,BITY
    ENDM

SKIPL0   MACRO    REGX,BITY
    BTFSC    REGX,BITY
    ENDM

; zero condition
SKIPZ    MACRO
    BTFSS    STATUS,Z
```

```
        ENDM

SKIPNZ  MACRO
        BTFSC    STATUS,Z
        ENDM

; carry condition
SKIPC   MACRO
        BTFSS    STATUS,C
        ENDM

SKIPNC  MACRO
        BTFSC    STATUS,C
        ENDM

; jump on zero condition
JMPZ    MACRO    K
        BTFSC    STATUS,Z
        GOTO     K
        ENDM

JMPNZ   MACRO    K
        BTFSS    STATUS,Z
        GOTO     K
        ENDM

; jump on carry condition
JMPC    MACRO    K
        BTFSC    STATUS,C
        GOTO     K
        ENDM

JMPNC   MACRO    K
        BTFSS    STATUS,C
        GOTO     K
        ENDM

; call on zero condition
CALLZ   MACRO    K
        BTFSC    STATUS,Z
        CALL     K
        ENDM

CALLNZ  MACRO    K
        BTFSS    STATUS,Z
        CALL     K
        ENDM

; call on carry condition
CALLC   MACRO    K
        BTFSC    STATUS,C
```

```
CALL      K
ENDM

CALLNC    MACRO      K
          BTFSS      STATUS,C
          CALL      K
          ENDM

; return on zero condition
RETZ      MACRO
          BTFSC      STATUS,Z
          RETURN
          ENDM

RETNZ     MACRO
          BTFSS      STATUS,Z
          RETURN
          ENDM

; return on carry condition
RETC      MACRO
          BTFSC      STATUS,C
          RETURN
          ENDM

RETNC     MACRO
          BTFSS      STATUS,C
          RETURN
          ENDM

LIST
```

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