

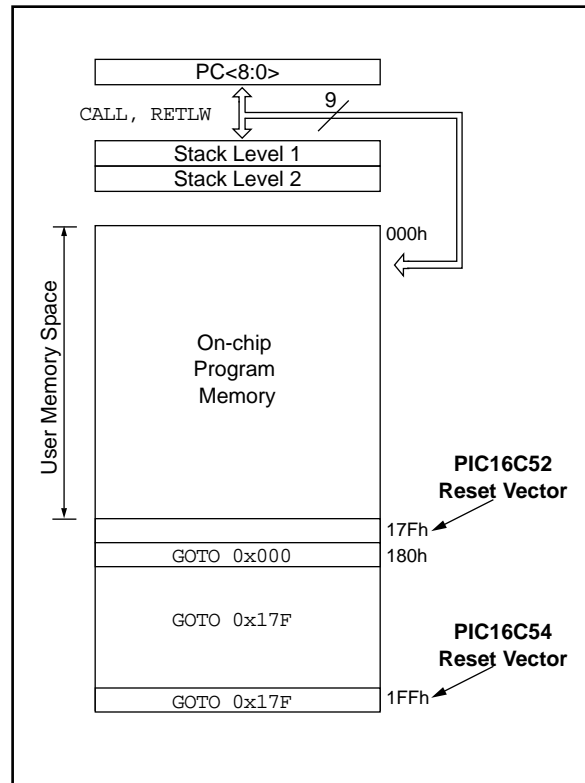
Code Development for the PIC16C52

CODE DEVELOPMENT PROCEDURE

To develop code on a PIC16C52 device, a PIC16C54/JW part can be used. In order to use a PIC16C54/JW device, the following conditions should be followed:

1. A PIC16C54/JW has 512 bytes (0x1FF) of program memory, whereas a PIC16C52 has 384 bytes (0x17F) of program memory. The "extra" locations should be programmed as follows:
 - a) Location 0x180 should be programmed with a "goto 0x00" instruction
 - b) Locations 0x181 through 0x1FF should be programmed with a "goto 0x17F" instruction.
 See Figure 1 for details, and for a standard "skeleton" program, use the code in Example 1.
2. The PIC16C54/JW has a Watchdog Timer (WDT), while the PIC16C52 does not. Therefore, the WDT on the PIC16C54/JW must be disabled. The "__CONFIG" command used in Example 1 disables the WDT.
3. The PIC16C54/JW has four oscillator modes, while the PIC16C52 has two. Therefore, only RC and XT oscillator modes should be used. The "__CONFIG" command used in Example 1 takes care of programming the XT Oscillator mode, if required.

FIGURE 1: PIC16C54 PROGRAM MEMORY MAP AND STACK



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EXAMPLE 1: CONVERSION CODE

```
;This test file "skeleton" depicts a standard format, which
;a user can use when programming a PIC16C54-JW device to
;"emulate" a PIC16C52, during code development
;
    list p=16c54, f=inhx8m
;
;include the header file from the correct directory, please
;verify the correct dos path for the header file "P16C5X.INC"
    include "c:\pictools\mpasm\P16C5X.INC"
;Define the configuration bits. Please note that the PIC16C52
;does not support the WDT, so _WDT_OFF should be selected.
;Also only RC and XT Oscillator modes are supported on the PIC16C52.
;Code protect is supported on the PIC16C52.
    __CONFIG _WDT_OFF & _XT_OSC      ;for XT mode only
    ;__CONFIG _WDT_OFF              ;for RC mode
;
    org      0x00
Start
    ;User's code should reside from 0x00 to 0x17F
    ;
    org      0x17f    ;reset vector for PIC16C52
;
;A "goto Start" instruction is recommended to be programmed at the reset
;vector, however the user may elect to program any code at this
;location.
;
;*****
;The code below MUST be programmed as indicated, in order for a
;PIC16C54-JW to work as a PIC16C52.
    org      0x180    ;program location not present in PIC16C52
    goto     0x00     ;roll over to location 0
;fill remaining locations with goto reset vector for PIC16C52
    FILL     (GOTO 0x17F), (0x1FF - $ + 1)
;
;*****
    end
```

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