

Code Development for the PIC16C52

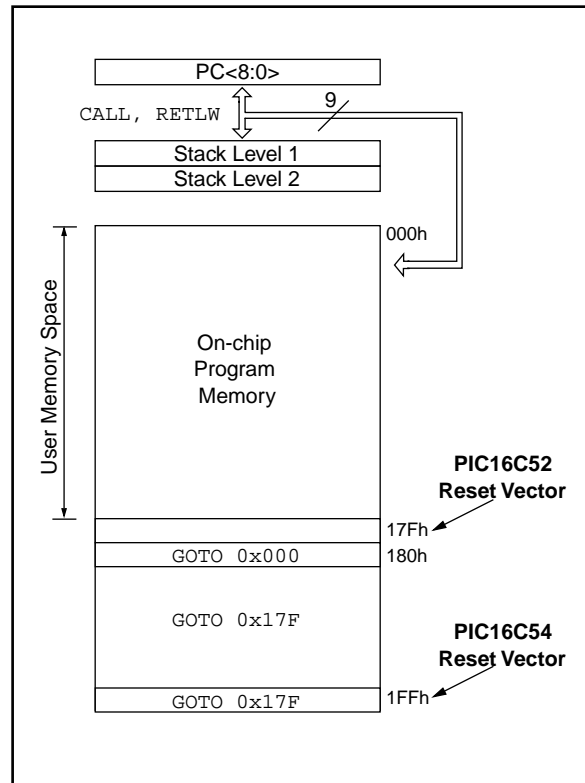
Author: Stan D'Souza
Microchip Technology Inc.

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 words (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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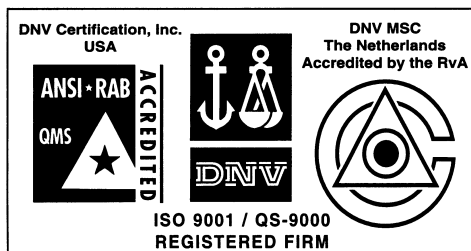
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WORLDWIDE SALES AND SERVICE

AMERICAS

Corporate Office

2355 West Chandler Blvd.
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Tel: 480-792-7200 Fax: 480-792-7277
Technical Support: 480-792-7627
Web Address: <http://www.microchip.com>

Rocky Mountain

2355 West Chandler Blvd.
Chandler, AZ 85224-6199
Tel: 480-792-7966 Fax: 480-792-7456

Atlanta

500 Sugar Mill Road, Suite 200B
Atlanta, GA 30350
Tel: 770-640-0034 Fax: 770-640-0307

Boston

2 Lan Drive, Suite 120
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Chicago

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Tel: 630-285-0071 Fax: 630-285-0075

Dallas

4570 Westgrove Drive, Suite 160
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Tel: 972-818-7423 Fax: 972-818-2924

Detroit

Tri-Atria Office Building
32255 Northwestern Highway, Suite 190
Farmington Hills, MI 48334
Tel: 248-538-2250 Fax: 248-538-2260

Kokomo

2767 S. Albright Road
Kokomo, Indiana 46902
Tel: 765-864-8360 Fax: 765-864-8387

Los Angeles

18201 Von Karman, Suite 1090
Irvine, CA 92612
Tel: 949-263-1888 Fax: 949-263-1338

New York

150 Motor Parkway, Suite 202
Hauppauge, NY 11788
Tel: 631-273-5305 Fax: 631-273-5335

San Jose

Microchip Technology Inc.
2107 North First Street, Suite 590
San Jose, CA 95131
Tel: 408-436-7950 Fax: 408-436-7955

Toronto

6285 Northam Drive, Suite 108
Mississauga, Ontario L4V 1X5, Canada
Tel: 905-673-0699 Fax: 905-673-6509

ASIA/PACIFIC

Australia

Microchip Technology Australia Pty Ltd
Suite 22, 41 Rawson Street
Epping 2121, NSW
Australia
Tel: 61-2-9868-6733 Fax: 61-2-9868-6755

China - Beijing

Microchip Technology Consulting (Shanghai)
Co., Ltd., Beijing Liaison Office
Unit 915
Bei Hai Wan Tai Bldg.
No. 6 Chaoyangmen Beidajie
Beijing, 100027, No. China
Tel: 86-10-85282100 Fax: 86-10-85282104

China - Chengdu

Microchip Technology Consulting (Shanghai)
Co., Ltd., Chengdu Liaison Office
Rm. 2401, 24th Floor,
Ming Xing Financial Tower
No. 88 TIDU Street
Chengdu 610016, China
Tel: 86-28-6766200 Fax: 86-28-6766599

China - Fuzhou

Microchip Technology Consulting (Shanghai)
Co., Ltd., Fuzhou Liaison Office
Unit 28F, World Trade Plaza
No. 71 Wusi Road
Fuzhou 350001, China
Tel: 86-591-7503506 Fax: 86-591-7503521

China - Shanghai

Microchip Technology Consulting (Shanghai)
Co., Ltd.
Room 701, Bldg. B
Far East International Plaza
No. 317 Xian Xia Road
Shanghai, 200051
Tel: 86-21-6275-5700 Fax: 86-21-6275-5060

China - Shenzhen

Microchip Technology Consulting (Shanghai)
Co., Ltd., Shenzhen Liaison Office
Rm. 1315, 13/F, Shenzhen Kerry Centre,
Renminnan Lu
Shenzhen 518001, China
Tel: 86-755-2350361 Fax: 86-755-2366086

Hong Kong

Microchip Technology Hongkong Ltd.
Unit 901-6, Tower 2, Metroplaza
223 Hing Fong Road
Kwai Fong, N.T., Hong Kong
Tel: 852-2401-1200 Fax: 852-2401-3431

India

Microchip Technology Inc.
India Liaison Office
Divyasree Chambers
1 Floor, Wing A (A3/A4)
No. 11, O'Shaugnessey Road
Bangalore, 560 025, India
Tel: 91-80-2290061 Fax: 91-80-2290062

Japan

Microchip Technology Japan K.K.
Benex S-1 6F
3-18-20, Shinyokohama
Kohoku-Ku, Yokohama-shi
Kanagawa, 222-0033, Japan
Tel: 81-45-471-6166 Fax: 81-45-471-6122

Korea

Microchip Technology Korea
168-1, Youngbo Bldg. 3 Floor
Samsung-Dong, Kangnam-Ku
Seoul, Korea 135-882
Tel: 82-2-554-7200 Fax: 82-2-558-5934

Singapore

Microchip Technology Singapore Pte Ltd.
200 Middle Road
#07-02 Prime Centre
Singapore, 188980
Tel: 65-334-8870 Fax: 65-334-8850

Taiwan

Microchip Technology Taiwan
11F-3, No. 207
Tung Hua North Road
Taipei, 105, Taiwan
Tel: 886-2-2717-7175 Fax: 886-2-2545-0139

EUROPE

Denmark

Microchip Technology Nordic ApS
Regus Business Centre
Lautrup høj 1-3
Ballerup DK-2750 Denmark
Tel: 45 4420 9895 Fax: 45 4420 9910

France

Microchip Technology SARL
Parc d'Activite du Moulin de Massy
43 Rue du Saule Trapu
Batiment A - 1er Etage
91300 Massy, France
Tel: 33-1-69-53-63-20 Fax: 33-1-69-30-90-79

Germany

Microchip Technology GmbH
Gustav-Heinemann Ring 125
D-81739 Munich, Germany
Tel: 49-89-627-144 0 Fax: 49-89-627-144-44

Italy

Microchip Technology SRL
Centro Direzionale Colleoni
Palazzo Taurus 1 V. Le Colleoni 1
20041 Agrate Brianza
Milan, Italy
Tel: 39-039-65791-1 Fax: 39-039-6899883

United Kingdom

Arizona Microchip Technology Ltd.
505 Eskdale Road
Winnersh Triangle
Wokingham
Berkshire, England RG41 5TU
Tel: 44 118 921 5869 Fax: 44-118 921-5820

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