REGISTER 14-1: CONFIG – CONFIGURATION WORD REGISTER

$\overline{CP}$	—	—	—	—	$\overline{CPD}$	LVP	BOREN	MCLRE	FOSC2	$\overline{PWRTE}$	WDTE	F0SC1	F0SC0
bit 13													bit 0

bit 13: **$\overline{CP}$:** Flash Program Memory Code Protection bit(2)
(PIC16F648A)
1 = Code protection off
0 = 0000h to 0FFFh code-protected
(PIC16F628A)
1 = Code protection off
0 = 0000h to 07FFh code-protected
(PIC16F627A)
1 = Code protection off
0 = 0000h to 03FFh code-protected

bit 12-9: **Unimplemented**: Read as '0'

bit 8: **$\overline{CPD}$:** Data Code Protection bit(3)
1 = Data memory code protection off
0 = Data memory code-protected

bit 7: **LVP**: Low-Voltage Programming Enable bit
1 = RB4/PGM pin has PGM function, low-voltage programming enabled
0 = RB4/PGM is digital I/O, HV on $\overline{MCLR}$ must be used for programming

bit 6: **BOREN**: Brown-out Reset Enable bit (1)
1 = BOR Reset enabled
0 = BOR Reset disabled

bit 5: **MCLRE**: RA5/$\overline{MCLR}$/V_{PP} Pin Function Select bit
1 = RA5/$\overline{MCLR}$/V_{PP} pin function is $\overline{MCLR}$
0 = RA5/$\overline{MCLR}$/V_{PP} pin function is digital Input, $\overline{MCLR}$ internally tied to V_{DD}

bit 3: **$\overline{PWRTE}$**: Power-up Timer Enable bit (1)
1 = PWRT disabled
0 = PWRT enabled

bit 2: **WDTE**: Watchdog Timer Enable bit
1 = WDT enabled
0 = WDT disabled

bit 4, 1-0: **FOSC<2:0>**: Oscillator Selection bits(4)
111 = RC oscillator: CLKOUT function on RA6/OSC2/CLKOUT pin, Resistor and Capacitor on RA7/OSC1/CLKIN
110 = RC oscillator: I/O function on RA6/OSC2/CLKOUT pin, Resistor and Capacitor on RA7/OSC1/CLKIN
101 = INTOSC oscillator: CLKOUT function on RA6/OSC2/CLKOUT pin, I/O function on RA7/OSC1/CLKIN
100 = INTOSC oscillator: I/O function on RA6/OSC2/CLKOUT pin, I/O function on RA7/OSC1/CLKIN
011 = EC: I/O function on RA6/OSC2/CLKOUT pin, CLKIN on RA7/OSC1/CLKIN
010 = HS oscillator: High-speed crystal/resonator on RA6/OSC2/CLKOUT and RA7/OSC1/CLKIN
001 = XT oscillator: Crystal/resonator on RA6/OSC2/CLKOUT and RA7/OSC1/CLKIN
000 = LP oscillator: Low-power crystal on RA6/OSC2/CLKOUT and RA7/OSC1/CLKIN

Note 1: Enabling Brown-out Reset does not automatically enable the Power-up Timer (PWRT) the way it does on the PIC16F627/628 devices.
2: The code protection scheme has changed from the code protection scheme used on the PIC16F627/628 devices. The entire Flash program memory needs to be bulk erased to set the $\overline{CP}$ bit, turning the code protection off. See "*PIC16F627A/628A/648A EEPROM Memory Programming Specification*" (DS41196) for details.
3: The entire data EEPROM needs to be bulk erased to set the $\overline{CPD}$ bit, turning the code protection off. See "*PIC16F627A/628A/648A EEPROM Memory Programming Specification*" (DS41196) for details.
4: When $\overline{MCLR}$ is asserted in INTOSC mode, the internal clock oscillator is disabled.

Legend:			
R = Readable bit	W = Writable bit	U = Unimplemented bit, read as '0'	
-n = Value at POR	'1' = bit is set	'0' = bit is cleared	x = bit is unknown