' sender.bas

' Code for the sender PIC in an example illustrating A/D conversion, hand shaking, serial communication, and LCD output

' Define non-default configuration settings (from the PIC16F88 code template)
#CONFIG
__CONFIG CONFIG1, _INTRC_IO & _PWRT_ON & _MCLR_OFF & _LVP_OFF
#endconfig

' Set the internal oscillator frequency to 8 MHz
Define OSC 8
OSCCON.4 = 1
OSCCON.5 = 1
OSCCON.6 = 1

' Setup the A/D converter
ANSEL = 0  ' turn off all A/D converters
ANSEL.0 = 1  ' turn on the AN0 (pin 17) A/D converter

' Define variables and constants
led   Var PORTA.2  ' LED attached to pin RA2
hand_shake Var PORTA.1  ' Sender
serial  Var PORTB.0  ' serial communication through pin RB0
pot_value Var Byte  ' POT value sent to receiver PIC
baud_rate Con 2  ' 9600 baud-rate mode for serial communication

' Blink the LED three times to indicate the PIC is running
Gosub Blink : Gosub Blink : Gosub Blink

' Main program loop
start:
   ' Wait for the sender to set the handshake line high
   Do While (hand_shake == 0) : Loop

   ' Read the POT value and send it serially to the receiver PIC
   Adcin 0, pot_value
   Serout serial, baud_rate, [pot_value]

   ' Blink the LED to indicate the value was sent
   Gosub Blink
Goto start

End  ' end of main program (not required since never reached)

' Subroutine to blink the LED on and off once
Blink:
   High led  ' turn on the LED
   Pause 250  ' wait 1/4 second
   Low led  ' turn off the LED
   Pause 250  ' wait 1/4 second
Return