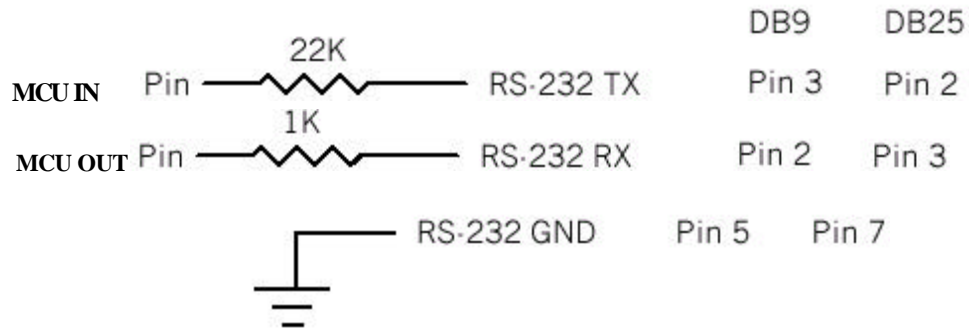


**MICROCONTROLLER  
DIRECT SERIAL CONNECTION**

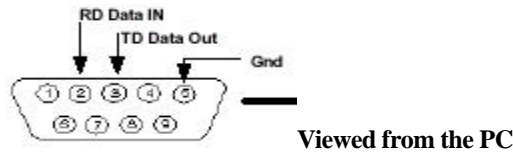
**MCU pins    Resistor    Serial connector (9 pin or 25 pin) to PC**

**PC's Serial Connections**



**Notes:**

RS232 TX should go to the serial INPUT pin on the microcontroller and the RS232 RX should go to the serial OUT pin  
Make sure that the ground (GND) is connected between the MCU and PC serial connector



**PICBASIC Example:**

```

***** RS232DIRECT.BAS *****
'Using a direct RS232 connection with PICBASIC SERIN & SEROUT Commands
' Example to convert to uppercase characters
'
Include "modedefs.bas"      ' Include serial modes
                          'We will use INVERTED at 9600 baud which is N9600

SO var PORTB.1             ' Define a serial out pin
SI var PORTB.2             ' Define a serial in pin
CHR var BYTE               ' Define a byte variable for the character

Serout SO, N9600, ["Uppercase Conversion",13,10]      'Opening msg and carriage return/line feed

MainLoop: Serin SI, N9600, CHR                        'Receive a character
          If (CHR < "a") OR (CHR > "z") Then Print   ' If in lower case then convert to upper case
          CHR = CHR - $20                             'Convert to upper case
Print:    Serout SO,N9600,[CHR," "]                 ' Send character followed by a space
Goto mainLoop                                         ' Do it forever!
End
'
***** END OF PROGRAM *****

```