

Workshop 8: *Read and Writing to PC*

Purpose: Using the embedded controller read and write data to and from a PC.

Objective: This workshop is designed to familiarize the student with elements of the embedded microcontroller.

Real world application: PC interface with embedded controller.

Requirements:

Hardware: Pin9 RS-232 connector , Max 233 (TTL to RS-232 converter chip), Scott Edwards Serial LCD

Procedure: Design and implement a program that will communicate from a Picstic to the PC and from the PC to the Picstic. Write a simple Qbasic program that will run on the PC. The program shall wait for a input message from the Picstic, when received it will transmit a reply message. Write Pbasic program that will transmit a message to the PC, then wait for the a reply message. Each time a message is received display the message, for the PC display the message on screen, for the Picstic display the message on an LCD. The following Qbasic code segments should help get you started:

```
OPEN "com1:2400,n,8,1,cd0,cs0,ds0,op0,RB1000" FOR RANDOM AS #1
```

CLS 'clears the screen

PRINT "<expression>" 'prints to screen

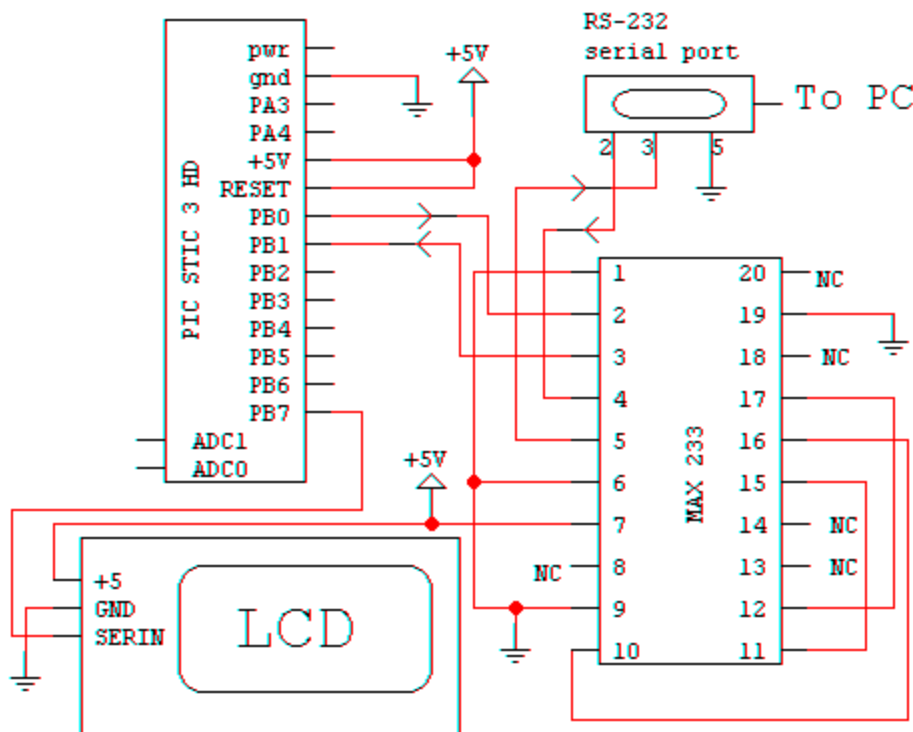
```
PRINT "" 'carriage return
```

```
data$ = INPUT$(1, #1) 'takes input for COM1
```

```
PRINT data$; 'print input
```

```
PRINT #1, CHR$(89); CHR$(69); CHR$(83); CHR$(32); 'outputs on COM1 "YES "
```

Circuit Drawing for Workshop #8



PicBasic Code for Workshop #8

[illegible]

'This program will communicate between the Picstic and a PC. To

'accomplish this task a Qbasic program must be running on the PC.

'Herb Wagner

[illegible]

Qbasic Code for Workshop #8