



Application Note

Product: Serial Plix

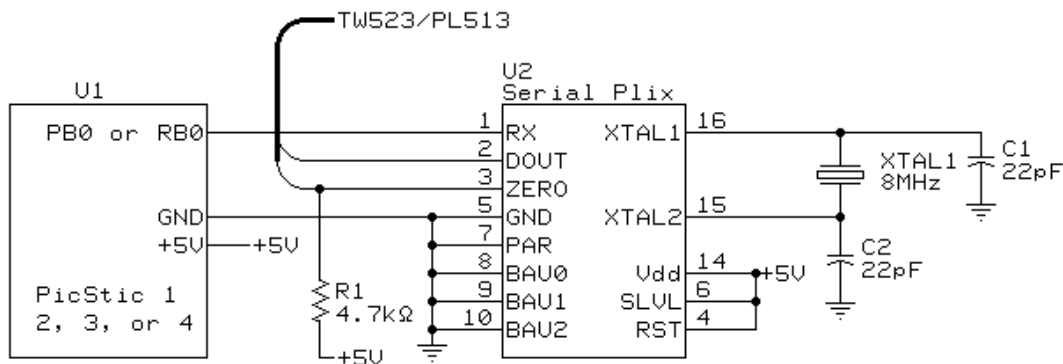
Controlling Serial Plix with a PicStic

Date: 4/11/00

Introduction: This application note demonstrates how to control Serial Plix with a PicStic 1, 2, 3, or 4 micro-controller.

Background: The Serial Plix is an 18-pin CMOS chip, which provides an intelligent communication interface between a serial port and X-10 AC power-line control modules. Using our example software and a TW523 power-line adapter module, you'll see how easy it is to remotely control appliances and lights through the power lines.

How it works: Serial Plix removes the burden of complex X-10 programming protocol from the designer by providing a simple serial interface. It takes care of the complex zero-crossing timing for sending and receiving X-10 commands so you don't have to. An otherwise simple embedded controller can now also feature X-10 power-line control by simply adding a Serial Plix chip to the design. The following schematic demonstrates all of the connections needed.



Program Listing:

- ```
` This program demonstrates how to control Serial
` Plix using a PicStic 1, 2, 3, and 4 with PicBasic.
```

[illegible]

```
Pause 1000 'Delay for voltage levels
 'to settle.
```

|                                       |                                                                   |
|---------------------------------------|-------------------------------------------------------------------|
| Begin: Serout SO,N9600,("\$UONA1602") | 'Send the command<br>'to turn on light<br>'A16.                   |
| PAUSE 3000                            | 'Delay to allow<br>'serial plix to<br>'complete it's<br>'command. |
| Serout SO,N9600,("\$DIMA1610")        | 'Send the command<br>'to dim light<br>'A16.                       |
| PAUSE 10000                           | 'Delay to allow<br>'serial plix to<br>'complete it's<br>'command  |
| Serout SO,N9600,("\$BRTA1610")        | 'Send the command<br>'to brighten light<br>'A16.                  |
| PAUSE 10000                           | 'Delay to allow<br>'serial plix to<br>'complete it's<br>'command  |
| Serout SO,N9600,("\$UONA1602")        | 'Send the command<br>'to turn off light<br>'A16.                  |
| PAUSE 3000                            | 'Delay to allow<br>'serial plix to<br>'complete it's<br>'command  |
| Goto Begin                            | 'Start the program<br>'over.                                      |