



Application Note

Product: Serial Plix

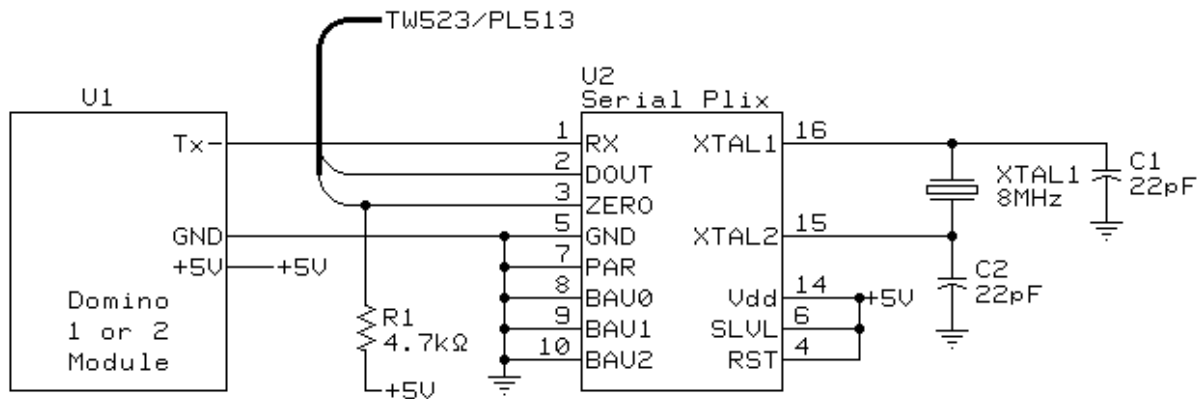
Controlling Serial Plix with a Domino

Date: 4/11/00

Introduction: This application note demonstrates how to control Serial Plix with a Domino 1 or 2 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:

```

10 REM *** This program demonstrates how to control
20 REM *** Serial Plix with the Domino.
30 REM *** Setting up and starting the processors real time clock.
40 REM *** This is to set a delay before sending the Serial Plix it's
50 REM *** next command.
60 TIME=0 : CLOCK 1
70 REM *** Sending the ASCII command to turn Unit A16 on.
80 REM *** Please note the comma at the end of the PRINT statement

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```
90 REM *** is to stop the Domino from printing a carriage return/linefeed.
100 PRINT "$UONA1602",
110 REM *** Delay the program to give Serial Plix tme to complete it's task.
120 IF TIME<5 THEN 120
130 REM *** Sending the ASCII command to dim unit A16
140 PRINT "$DIMA1615",
150 IF TIME<25 THEN 150
160 REM *** Sending the ASCII command to brighten Unit A16.
170 PRINT "$BRTA1615",
180 IF TIME<45 THEN 180
190 REM *** Sending the ASCII command to turn off Unit A16.
200 PRINT "$OFFA1602",
210 REM *** Delay the loop before the program starts over.
220 IF TIME<50 THEN 220
230 REM *** Shutting down the processors real time clock
240 CLOCK 0
250 GOTO 60
```