ATtiny841 Pseudo Code for Controller Project

Incoming Serial Command format (String Format)

NextLevel:01:02:03:04

"NextLevel:" tells controller this is a command to go to the next level. Will always be the same.

"01": 00-FF 256 bit value of RED register
"02": 00-FF 256 bit value of WHT register
"03": 00-FF 256 bit value of BLU register
"04": 00-FF 256 bit value of UVB register <Reserved for now, not used in this program>

/* Begin Pseudo Code */

Int RED
Int WHT
Int BLU

Void Setup {

String Command In

Serial.begin (9600)

Read MCUSR register

       If RESET then

              RED = WHT = BLU = 0xFF

       Else

              Load RED, WHT, BLU from NVRAM

       Endif

}

Void Loop {

       While Serial.available ()==0{

       }

       CommandIn = Serial.read()

       If string begins with "NextLevel:"

Parse 01:02:03 and store the appropriate integer values in RED, WHT and BLU

Endif

/* Turn off the relay and fans if all values are 00 */

If RED = WHT = BLU = 0x00

Digitalwrite (PA0, 0)

Else

Digitalwrite (PA0, 1)

Endif

/* Store the new values in NVRAM if they have changed. Otherwise no need to write them to minimize write cycles */

If RED or WHT or BLU has changed in value

Then Store new values in NVRAM memory

Endif

/* PWM Signal Output levels of RED, WHT and BLU */

Analog.write (PA7, RED)

Analog.write (PB2, WHT)

Analog.write (PA3, BLU)

}