Snooker Game

Design Brief

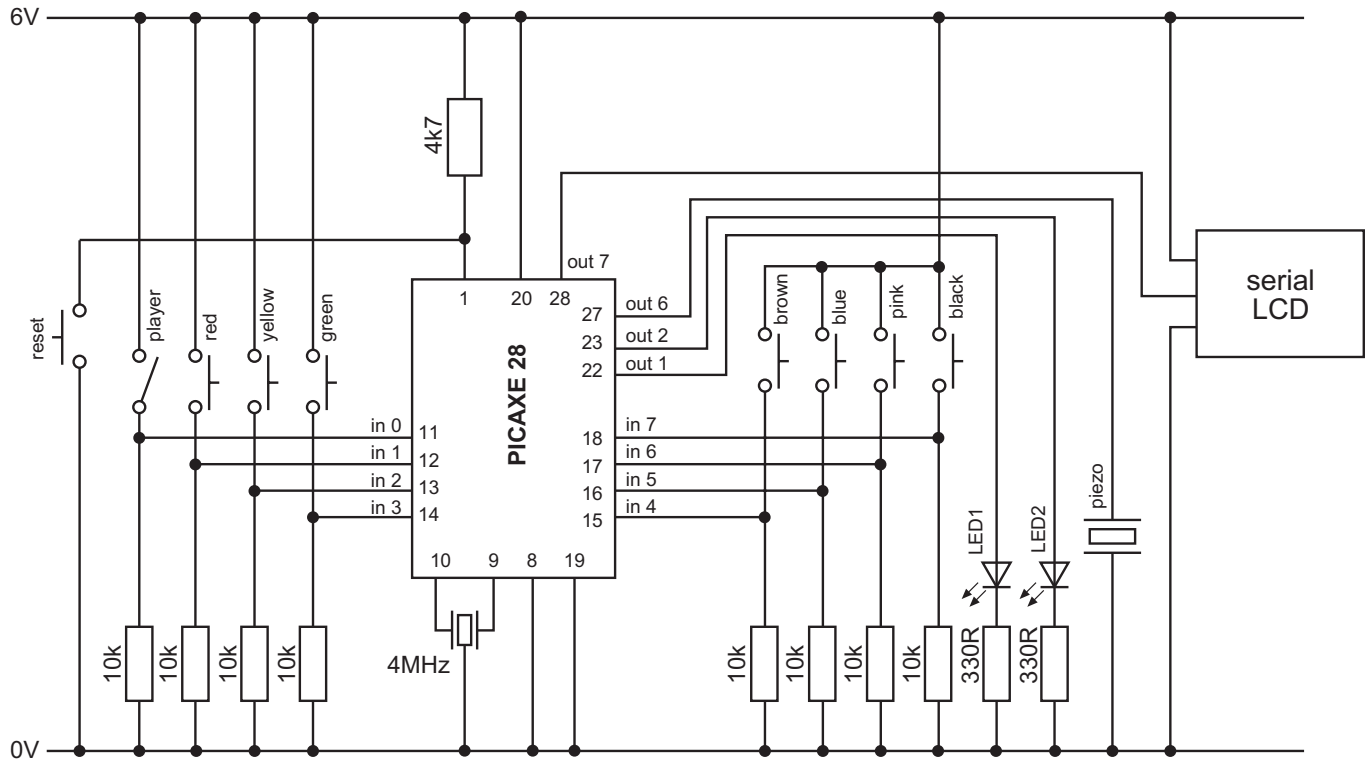
Design an electronic snooker scoring system.

Circuit Explanation

A series of coloured switches are used to represent each colour ball. A slide switch is used to switch between player 1 and player 2, and an LED indicates which player is selected. A serial LCD module is used to display the snooker score.

Program Explanation

The scores for the two players are scored within two variables b0 and b1. When a switch is pushed the correct value (1 to 7) is added to the appropriate players score. This score is then updated and then shown on the serial LCD module.



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Program Listing

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‘ Snooker Scoring Device
‘ For PICAXE-28


init: let b1 = 0                ‘ reset player 1 score
      let b2 = 0                ‘ reset player 2 score
      serout 7,N2400,(254,1)    ‘ clear LCD display
      pause 30                  ‘ short delay for LCD

main: ‘ update scores on LCD
      serout 7,N2400,(254,128,”Player 1 = “,#b1,”  “)
      serout 7,N2400,(254,192,”Player 2 = “,#b2,”  “)

      let b3 = 0                ‘ reset new ball value to 0

      ‘ now loop checking all the colour switches
loop: if pin7 = 1 then black
      if pin6 = 1 then pink
      if pin5 = 1 then blue
      if pin4 = 1 then brown
      if pin3 = 1 then green
      if pin2 = 1 then yellow
      if pin1 = 1 then red

      ‘ also check player switch for correct LED

      if pin0 = 1 then light2   ‘ jump if player 2

light1:   high 1                ‘ light player 1 LED
      low 2                     ‘ player 2 off
      goto loop                 ‘ keep looping


light2:   high 2                ‘ light player 2 LED
      low 1                     ‘ player 1 off
      goto loop                 ‘ keep looping

      ‘ this section adds new ball score to variable b3
      ‘ note the multiple entry points
      ‘ to give correct value 1 to 7
      ‘ e.g. black(7) = 1+1+1+1+1+1+1

black:    let b3 = b3 + 1       ‘ black = 7
pink: let b3 = b3 + 1           ‘ pink = 6
blue: let b3 = b3 + 1           ‘ blue = 5
brown:    let b3 = b3 + 1       ‘ brown = 4
green:    let b3 = b3 + 1       ‘ green = 3
yellow: let b3 = b3 + 1         ‘ yellow = 2
red:  let b3 = b3 + 1           ‘ red = 1

      sound 6,(50,100)          ‘ make a beep sound

      ‘ check to see if added to player 1 or 2
      if pin0 = 1 then addto2   ‘ jump if player 2

addto1:   let b1 = b1 + b3      ‘ add score to player 1
      goto main       ‘ loop back & update LCD

addto2:   let b2 = b2 + b3      ‘ add score to player 2
      goto main                 ‘ loop back & update LCD
```

