Game Timer

Gadget Freak

Assembly Instructions

Program the PIC12F629 with the included program (zip file contains the source code, also included below for reference). The program was written in assembly so no compiler purchase is required.

Assemble according to the schematic. As drawn, use a piezo speaker. If a magnetic speaker is used, insert a suitable capacitor to block any DC signal from the microcontroller. A few tens of microfarads will probably be sufficient. Don't forget the series resistors on the LEDs. The switch to select between one and two players uses the internal pull-ups in the processor so no external pull-up is required. Use an isolated 5V power adapter or other power supply to provide the 5V power rail.

Install the assembly in a suitable enclosure with labels for the switches and LEDs. See the video for one possible finished appearance.

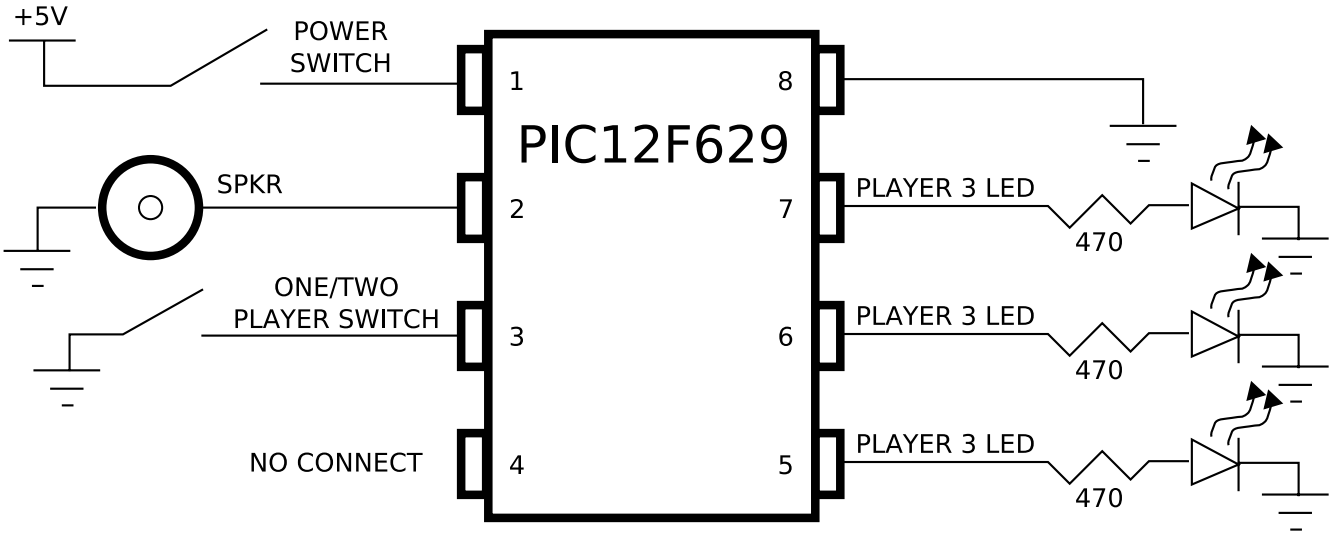
Operating Instructions

The “One/Two Player” switch is only read at power-on, so to change modes, turn the power off and back on after changing this switch.

At power up, the switch is read, and a sequence of three beeps followed by one long beep indicates startup. The first player(s) LED(s) illuminate. After 15 minutes, a 4 second beep indicates a change of players. The rotation will continue until the power is turned off.

Bill of Materials with Allied part numbers

- (1) 653-0248 – PIC 12F629 microcontroller
- (1) 623-2038 – Piezo Speaker
- (2) 676-3000 – switch
- (3) 296-4768 – 470 ohm resistors
- (3) 405-0011 – LEDs
- (1) 272-0008 - Enclosure
- (1) 653-0248 – Power adapter
- (1) 653-0248 – US prongs for power adapter


+5V
POWER
SWITCH
1
8
PIC12F629
SPKR
2
7
PLAYER 3 LED
470
ONE/TWO
PLAYER SWITCH
3
6
PLAYER 3 LED
470
NO CONNECT
4
5
PLAYER 3 LED
470