

List of lights that require Arduino control

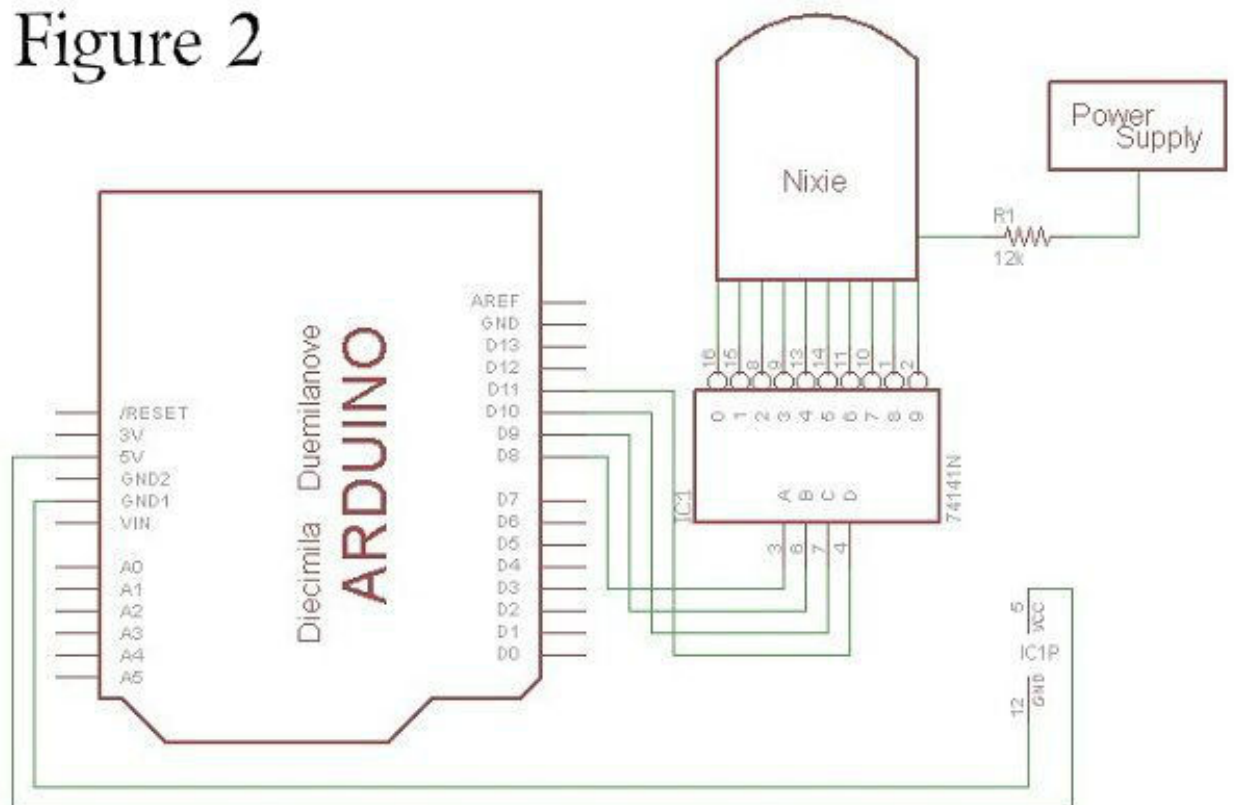
(~ indicates PWM control)

- 1) *KeypadGreen* ~
- 2) *KeypadButtons* ~
- 3) *KeypadCLR*
- 4) *KeypadOK*
- 5) *KeypadYellow* ~
- 6) *KeypadMosfet* (this controls all the “always on” LEDs on keypad)
- 7) *TimerLED* (series of 5 LEDs around the bargraph timer)
- 8) *PowerCrystals* ~
- 9) *BrickLamp*
- 10) *ControlPanel* (controls 4 “always on” LEDs in control panel)
- 11) *PINdigit1correct*
- 12) *PINdigit2correct*
- 13) *PINdigit3correct*
- 14) *PINdigit4correct*
- 15) *PINdigit1wrong*
- 16) *PINdigit2wrong*
- 17) *PINdigit3wrong*
- 18) *PINdigit4wrong*
- 19) *BrickWarningDoor*
- 20) *BrickWarningFinger*
- 21) *ButtonLED1*
- 22) *ButtonLED2*
- 23) *ButtonLED3*
- 24) *Panel1Mosfet*
- 25) *PaintingLight*
- 26) *ClockLight*

List of other components that require Arduino control:

- 1) *Display* (a Osram Opto SLO 2016 alphanumeric display)
 - a. *Requires 10 Arduino digital pins*
- 2) *Timer* (a 24LED bargraph)
 - a. *Requires Arduino pins #20 and #21*
- 3) *Sound trigger module*
 - a. *I haven't had a chance to test this component yet*
 - b. *Here's the hookup guide: <https://learn.sparkfun.com/tutorials/wav-trigger-hookup-guide-v11>*
 - c. *I don't think it requires any Arduino pins if we're not using it through serial communication—just uses the 16 triggers on the sound module*
- 4) *NixieTube1* with SN74141 chip
 - a. *This chip requires 4 Arduino digital pins*
- 5) *NixieTube2* with SN74141 chip
 - a. *This chip requires 4 Arduino digital pins*
 - b. *Below is a wiring diagram of the Tube and chip:*

Figure 2



- 6) LEDmatrix (an 8X8 adafruit LED matrix)
 - a. Requires 2 Arduino digital pins
 - b. <https://learn.adafruit.com/adafruit-led-backpack/1-2-8x8-matrix>
- 7) PIR motion sensor
 - a. Turns off all lights and servos when period of inactivity is sensed.
 - b. The same motion sensor code that was used in the last project can be used here.
- 8) VolumeControlPOT (Potentiometer to control sound volume of WAV trigger sound module)
 - a. This might not require Arduino control. I need to do some tests with the sound unit and volume control.
- 9) KeypadGreenPOT (Potentiometer to control brightness of KeypadGreen light)
 - a. Requires an Arduino analog pin