Escape Room "Connect the Wires" Puzzle Board

>Input power: 12V 1.5A

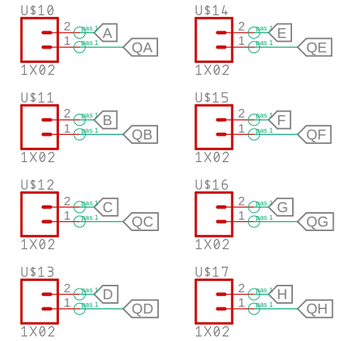
Place barrel jacks in a grid, connect the solution pairs to a pair of letters in the included PUZZLE WIRES section of the board.

Play some music and sound effects on the DFMini Player.

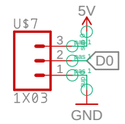
Trigger an electromagnet or other device with the relay.

Flash some lights with Neopixel LEDs.

Puzzle Wire Jumpers

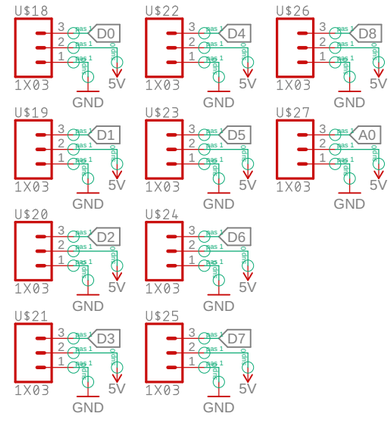


Neopixel Jumper

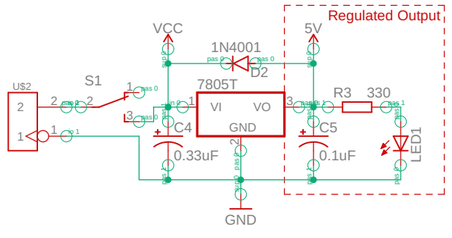


Pin arragement matches Neopixel LED strip

NodeMCU IO Breakout Pins

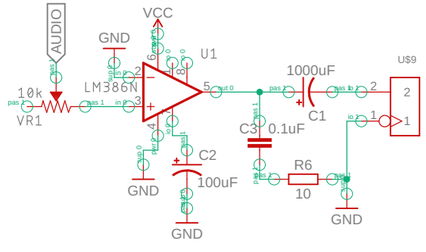


Input Power Regulation



Diode protects circuit from negative polarity.
LED indicates power output to board.
C4 and C5 must be as physically close to regulator as possible.

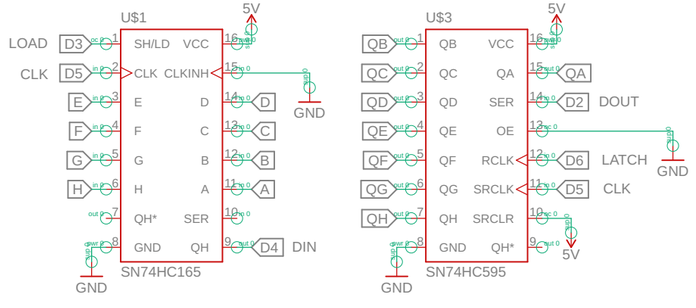
Audio Amplifier



C1 smooths the audio and can vary, but must be greater than 250uF.
C2 filters amplified VCC noise.
C3 filters high frequency audio noise.
Potentiometer CW turn increases volume.

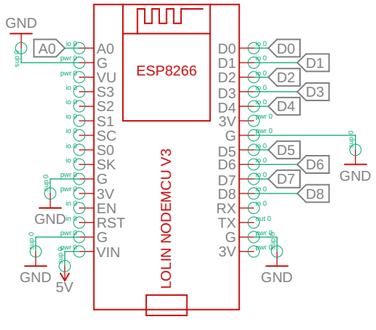
SN74HC165N Pull Down Resistor

Shift Registers

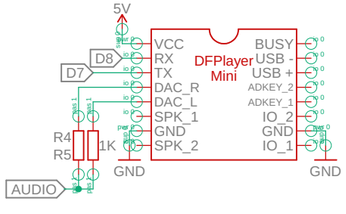


Shift register pins can remain disconnected when unused.
All shift register clocks are tied together to minimize the control pins required.
Shift registers are always active, and all resets and inhibitors are disabled.

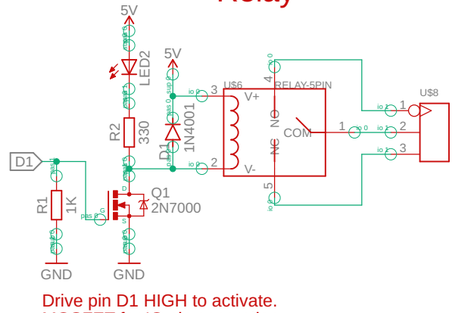
ESP8266 Controller



Music Player



Relay



Drive pin D1 HIGH to activate.
MOSFET for IO pin separation.
LED indicates relay state.
Diode protects circuit from negative discharge on relay close.

TITLE: Wire_Puzzle

Design by: Adam Billingsley

REV: v1.0

Date: not saved!

Sheet: 1/1