Panel Clock Connections

1. 32 x 32 RGB Matrix (See also AdaFruit tutorial on wiring and connections) for Arduino Mega:
   1. CLK 11
   2. OE 9
   3. LAT 10
   4. A A0
   5. B A1
   6. C A2
   7. D A3
2. Brightness LDR Diagram, schematic

   Description automatically generated
   1. Positive 5v
   2. Ground
   3. Mega Pin A7 (analog)
3. Set, Up and Down Buttons (SPST)
   1. Ground on one side
   2. Mega Pins 2,3 and 4 respectively
4. Showoff/Demonstration Button
   1. Ground
   2. Mega Pin 7
5. Automatic Night Shutoff Pin (ANSO)
   1. Ground
   2. Mega Pin 12
6. Chime/Cuckoo Select (SPDT Center off)
   1. Middle of switch contacts to Ground
   2. Upper (Westminster Chimes) to Pin 5
   3. Lower (Bell or Cuckoo) to Pin 6
7. AdaFruit FX 2Mb SoundBoard
   1. Ground to Ground
   2. 5V Vin to 5 v (Positive)
   3. Sound board activation pins 0-9 to Mega Pins 40-49 respectively
   4. ACT Pin to Mega Pin 8
   5. Speaker pins to 8 ohm speaker (no polarity)
8. RTC 3231 Real time clock
   1. Ground to Ground
   2. Vin to 5v
   3. SCL and SDA to SCL and SDA on Mega
9. BME680 temperature, humidity and barometric pressure
   1. Ground to Ground
   2. Vin to 5v
   3. SCL and SDA to SCL and SDA on Mega
10. AC to DC adapter (4 or 5 amps)
    1. 5v + wired directly to Arduino Mega, Sound Board, Matrix, LDR, RTC and BME680
    2. Same for Ground (-5v) (i.e., no power drawn through the Arduino Mega)