

24-LED Circuit Pin connection chart  
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These charts were made in preparation for building a 24-LED circuit for the Lumenhattio bike helmet/hat project. 4 prototyping boards were used, one each for the front, back, left, and right sides of the Lumenhattio. Six LEDs were used on each board. A Maxim 7219 chip was used to drive the LEDs, and an Arduino was used to control the Maxim and the LEDs.

Board (Physical) Location of LED	Array Location (how to refer to this LED in Arduino)	Maxim Pin # (To Negative LED prong)	Maxim Pin # (To Positive LED prong)
Front	0,0	2	22
Front	0,1	2	14
Front	0,2	2	16
Front	0,3	2	20
Front	0,4	2	23
Front	0,5	2	21
Right	0,6	2	15
Right	0,7	2	17
Right	1,0	11	22
Right	1,1	11	14
Right	1,2	11	16
Right	1,3	11	20
Left	1,4	11	23
Left	1,5	11	21
Left	1,6	11	15
Left	1,7	11	17
Left	2,0	6	22
Left	2,1	6	14
Back	2,2	6	16
Back	2,3	6	20
Back	2,4	6	23
Back	2,5	6	21
Back	2,6	6	15
Back	2,7	6	17

8-pin mini-DIN Male Serial cables were cut and reused to connect the Maxim chip to each prototyping board. The serial cable is a bundle of 8 color-coded wires. Referring to the chart above, I then made the charts below to help organize Maxim pins and Serial wires during the connection/soldering process.

Front Board

<b>Serial Cable: Wire Color</b>	<b>Maxim Pin #</b>
Red	2
Orange	14
Yellow	16
Green	20
Blue	21
Purple	22
Brown	23
Black	(unused)

Right Board

<b>Serial Cable: Wire Color</b>	<b>Maxim Pin #</b>
Red	2
Orange	11
Yellow	14
Green	15
Blue	16
Purple	17
Brown	20
Black	22

Left Board

<b>Serial Cable: Wire Color</b>	<b>Maxim Pin #</b>
Red	6
Orange	11
Yellow	14
Green	15
Blue	17
Purple	21
Brown	22
Black	23

Back Board

<b>Serial Cable: Wire Color</b>	<b>Maxim Pin #</b>
Red	6
Orange	15
Yellow	16
Green	17
Blue	20
Purple	21
Brown	23
Black	(unused)