

# Project (03.01) Digital Voltage level indicator / Meter (P1)

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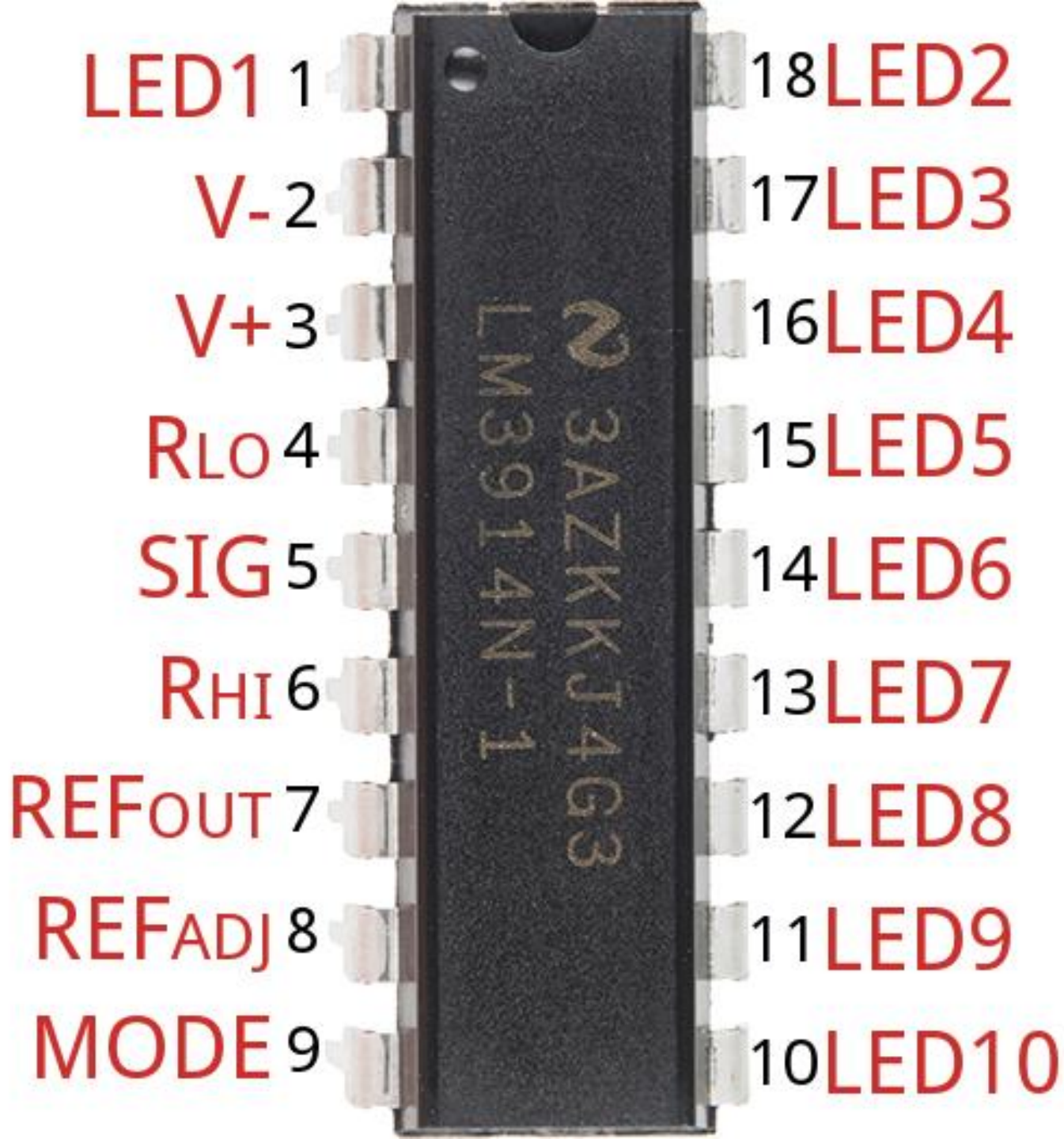
By:

**Dr. Ahmed ElShafee**

# LM3914

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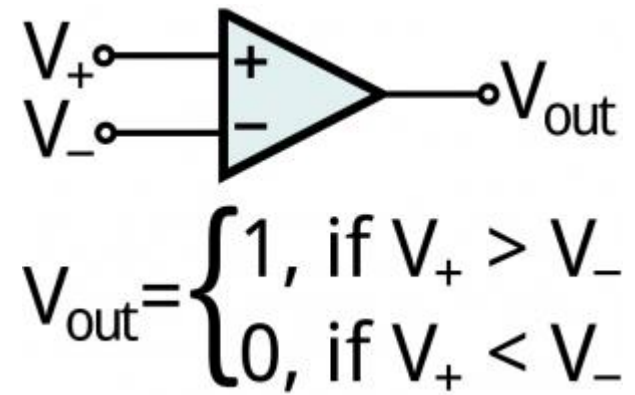
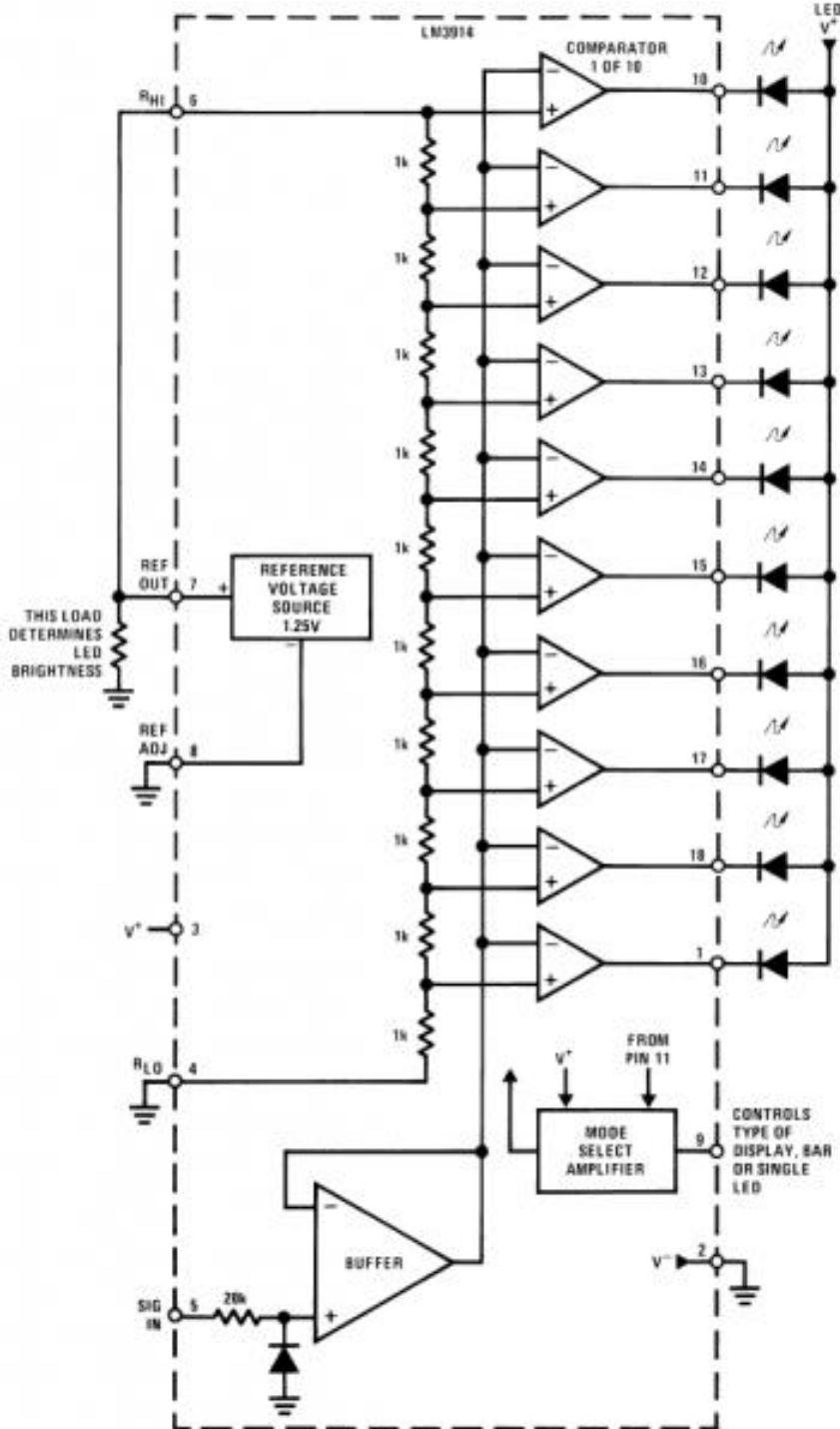
- The LM3914 and LM3916 are a two ICs in a series of monolithic, analog-controlled LED drivers. With these chips, all it takes is a single, analog signal to drive a string of 10+ LEDs, which can be configured into either bar mode (where all LEDs below a certain point turn on) or dot mode (with only a single LED on at a time). Hook them up properly, and you can create all sorts of nifty multi-LED displays, like an audio-visualizing VU meter.
- These two ICs are similar in pin-out and interface. They differ in how they map an analog signal to output LED. The LM3914 uses a **linear** output scale while the LM3916 uses a more **logarithmic VU (volume unit) scale**, which makes it well-suited to audio applications.



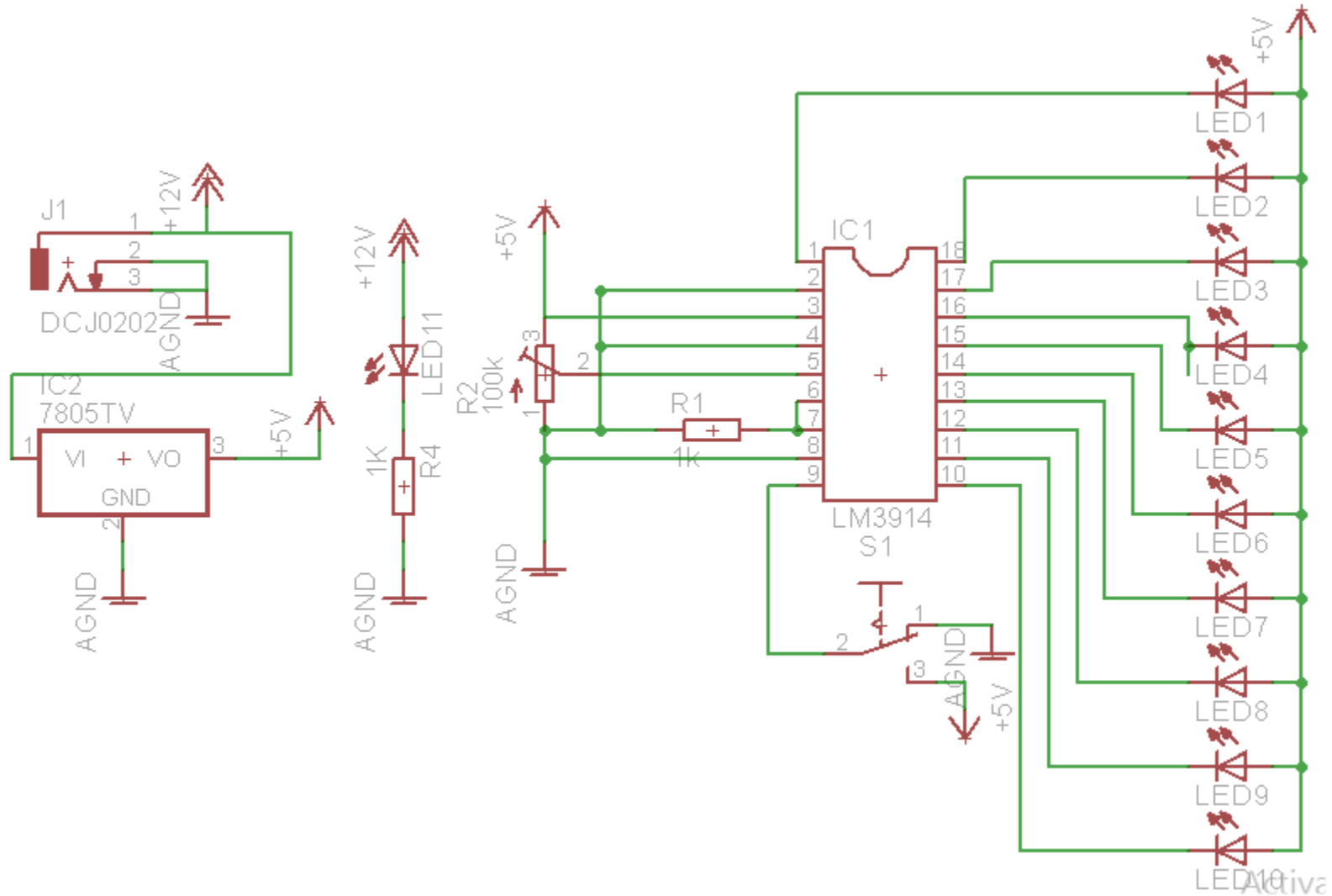
#	Pin Name	Pin Function	#	Pin Name	Pin Function
1	LED 1	First (lowest value) LED	18	LED 2	2nd LED
2	V <sup>-</sup>	Ground	17	LED 3	3rd LED
3	V <sup>+</sup>	Supply voltage (3-25V)	16	LED 4	4th LED
4	R <sub>LO</sub>	Divider low voltage	15	LED 5	5th LED
5	Signal In	Analog signal in	14	LED 6	6th LED
6	R <sub>HI</sub>	Divider high voltage	13	LED 7	7th LED
7	Ref Out	Reference output voltage	12	LED 8	8th LED
8	Ref Adj	Voltage reference adjust	11	LED 9	9th LED
9	Mode	Dot/Bar mode select	10	LED 10	Last (highest analog input) LED



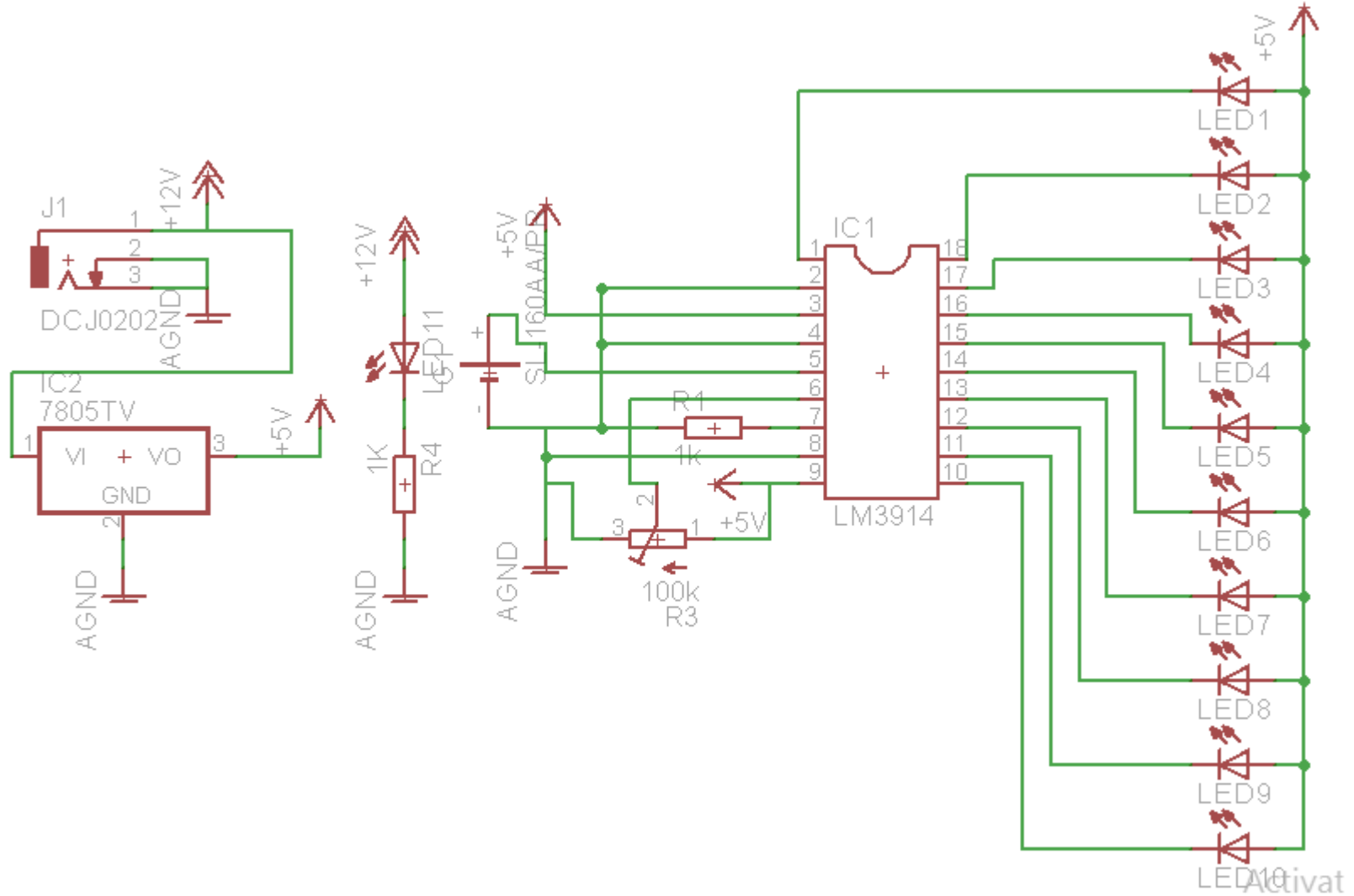




# Part 01: simple level indicator

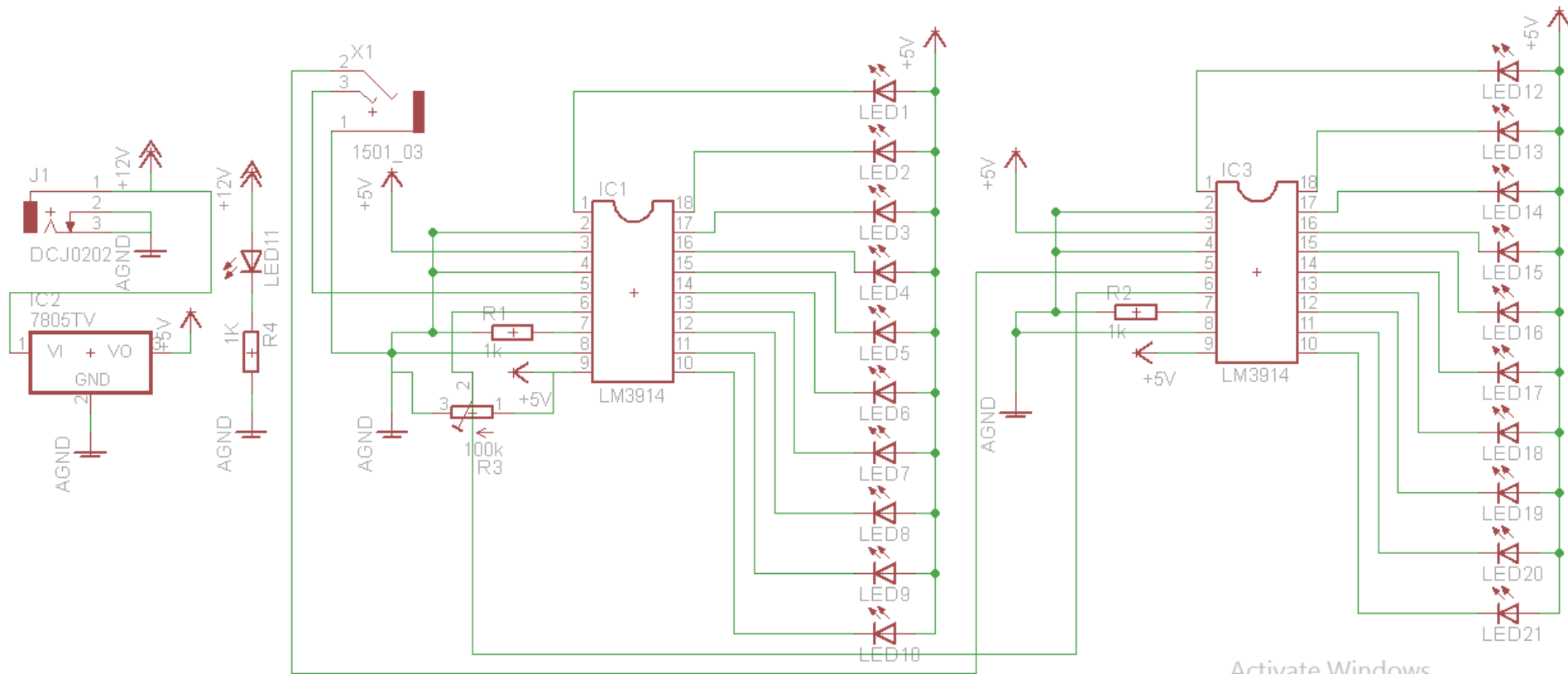


# Part 02: battery tester



# Part 03: audio analyzer

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**Thanks,..**  
**See you next week (ISA),...**