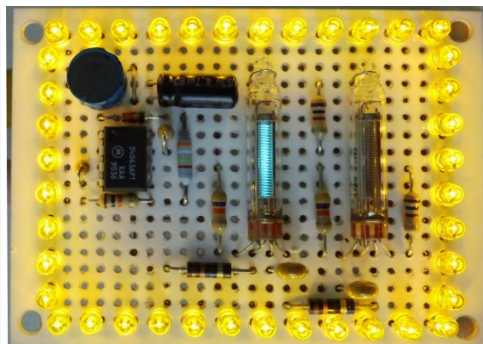
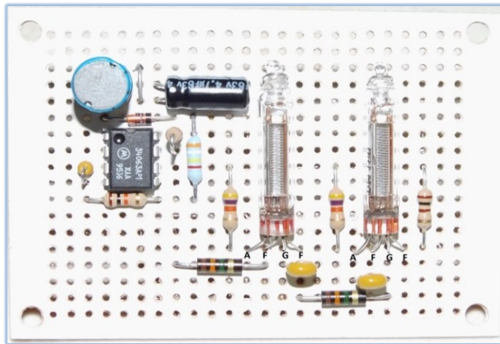
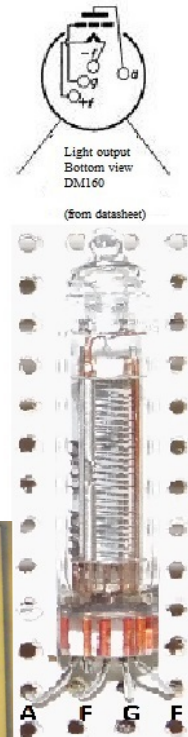
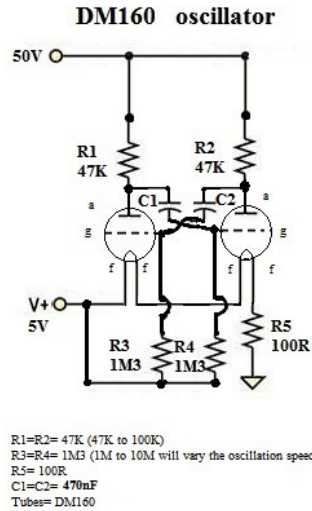
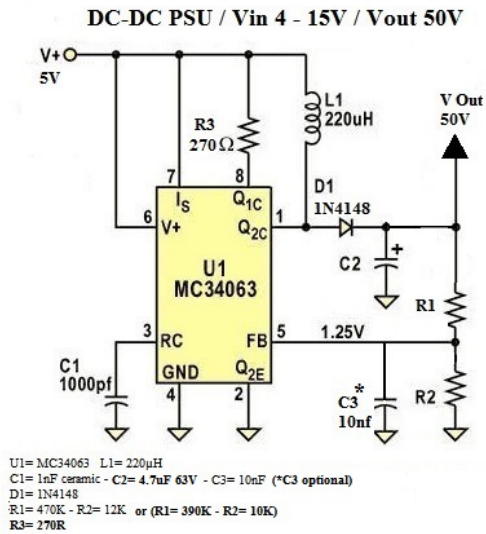


DM160 Oscillator with DC-DC PSU – Oscillateur à tube DM160 avec alimentation 50V



Kit to be assembled on a 5x7 cm prototype board (can also be assembled / tested on a solder-less breadboard)

This project needs minimum electronic knowledge and soldering experience.

A multi-meter is more than recommended.

ATTENTION: this project expects a 5V power supply. Tube oscillator is voltage sensitive and other power source may need some changes in the component values.

Project can be powered from a USB port.

The 50V switched PSU can be powered from 5V or higher. This PSU generate the 50V needed for the DM160 tube Anode.

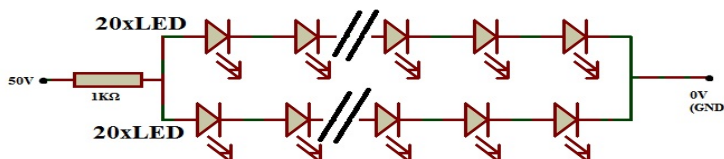
If needed, the project can be powered from a higher voltage source; if so, a 5V regulator can be installed on board.

- 1) Assemble the switched DC-DC psu first and test for output voltage. (do not power on the PSU before it is fully assembled, double check you assembly before applying power, C3 may be required if using a breadboard)
- 2) Assemble the DM160 oscillator parts, if wanted, install the LEDs.
 (The on board 50V PSU is used as a LEDs driver. It makes LEDs soldering all around the board easy with all LEDs serially connected into 2 strings of 20 LEDs each powered in parallel from a through a single 1K resistor (<14ma in total for LEDs)
- 3) Enjoy ☺

Free layout (not critical), picture provided as a help for the assembly. More details on the DM160 tube available in the datasheet.

FR:

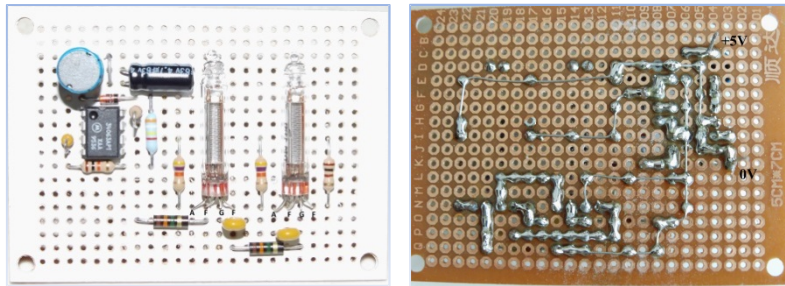
- 1) Montage puis test de l'alimentation 50V (C3 n'est pas installé sur la photo, nécessaire que sur plaque de test sans souduer)
- 2) Montage de l'oscillateur DM160, montage des DEL si voulu (Le 50V est utilisé comme tension pour piloter les DEL. Les DEL sont connectées en série dans deux chaînes de 20 LED chacune et alimentées en parallèle via une résistance de 1K (<14ma au total))



Components :

- 2 x tube DM160 Phillips
- 1 x inductor 220uH
- 1 x ic MC34063 ("DC/DC" convertor)
- 1 x diode 1N4148
- 1 x capacitor 1nF (102)
- 1 x capacitor 10nF (103)
- 2 x capacitor 0.47uF (474)
- 1 x capacitor 4.7uF 63V
- 1 x resistor 270Ω
- 1 x resistor 390KΩ
- 1 x resistor 10KΩ
- 2 x resistor 47KΩ
- 2 x resistor 1.3MΩ
- 1 x resistor 100Ω
- 1 x resistor 1KΩ
- 40 x yellow LED
- 1 x 5x7cm prototype pcb

Example of assembly on the prototype board (front and back side without LED installed)



Front of the board with LED installed

