REBER electronic

Battery Voltage Indicator, Display 10 LEDs

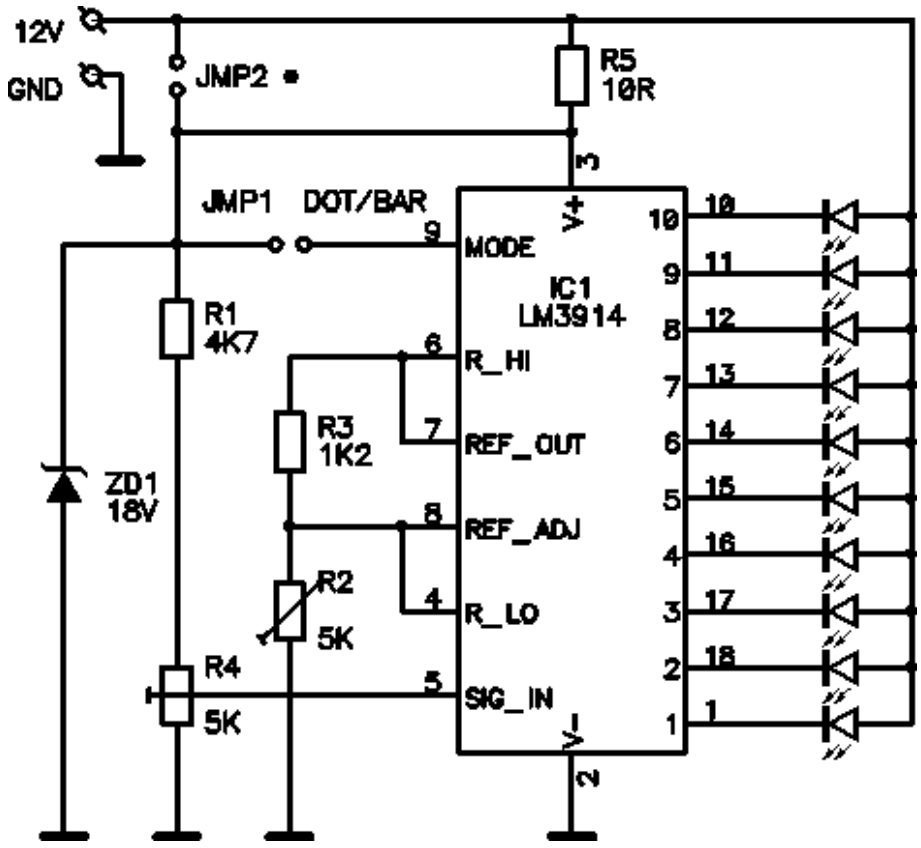
The LM3914 integrated circuit is also very useful for displaying 12V battery voltage, in addition to its use for various voltage displays and VU meters. The circuit is powered from the same source as its level, so the circuit has only two power connectors.

10 LEDs are used to indicate the voltage, or an LED bar with 10 LEDs integrated in the dil housing. The LED bar is available in a variety of colors, including in combination colors.

The circuit diagram is simple, and I have prepared 3 versions of the printed circuit board. The first version is using an LED bar display, the second one is with a 10 3mm LED and the third one is using a 10 5mm LED. Square or rectangular LEDs can be used instead of round LEDs.

The voltage display range is not from 0 to 15V, but from 10V to 15V, which is quite sufficient for use in autoelectics. Since there are two trimmer potentiometers on the circuit, it is possible to adjust the lower and upper limits of the display if desired, otherwise in a narrow range between 10V and 15V. The lower limit can also be set lower than 10V, but the circuit at much lower voltage is no longer as useful because the measured voltage is also a power supply.

Since there are also high voltage spikes in the car installation, overvoltage protection is used with the 18V zener diode. A resistor is used to reliably operate and prevent the destruction of the zener diode. LED power goes directly to the power supply without resistance. The circuit includes a jumper to tie the barrier and a jumper to select the dot / bar display mode. The dot display mode means a dot - only one LED is lit, and the bar mode is a dot - multiple LEDs are lit. Jumpers are made right on the printed circuit board, switched on with a chin cap.



The article is still in the making stage, the circuit has been tested and I need to paint the case and outline the assembly scheme ...