Simple AVR Programmer

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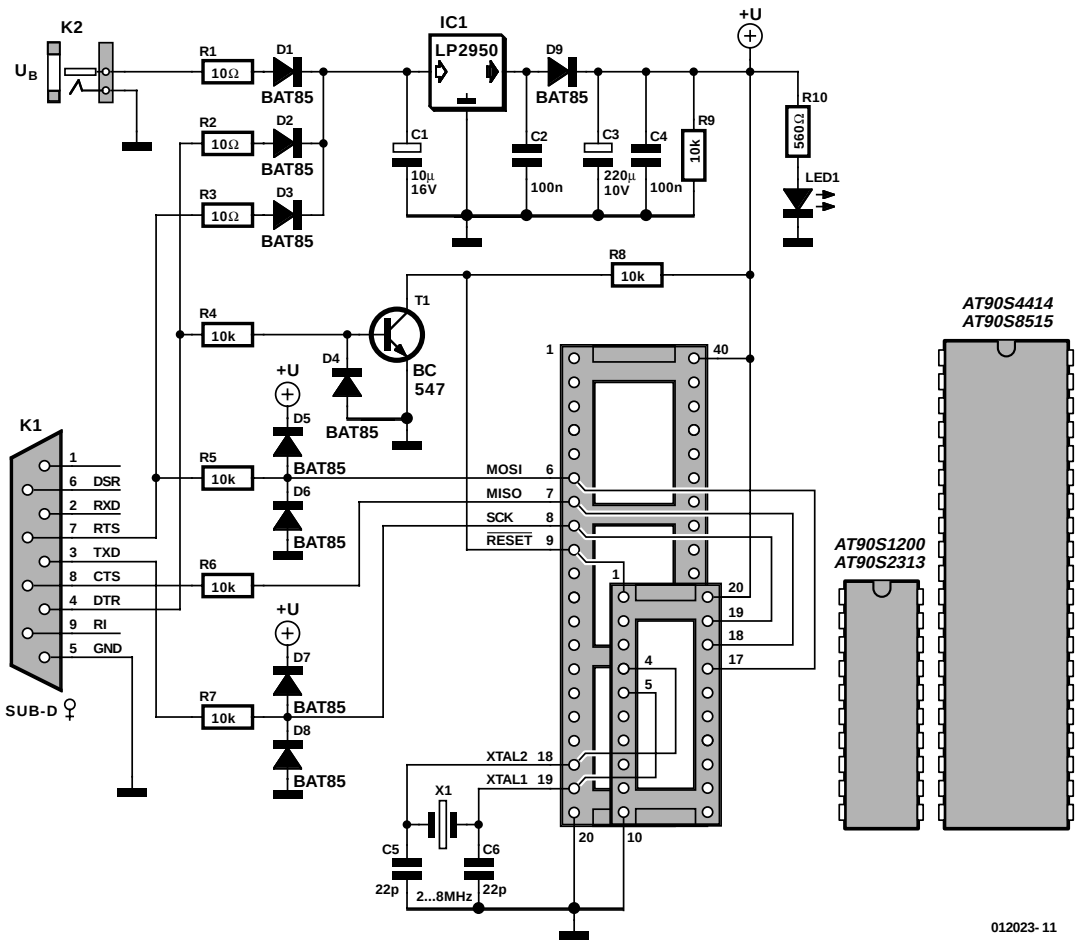
This simple programmer is a slimmed-down version of the programmer described in the March issue. It provides an extremely low-cost entry into developing applications using AVR microcontrollers. For this reason, particular attention has been given to achieving a simple, economical design.

The programmer is connected to the PC by a standard RS232 interface. No external supply voltage is required to use the programmer, since the necessary current (a few milliampères) can be drawn directly from the serial port of the computer.

In order to reduce costs, an inexpensive fixed +5-V regulator could be used for IC1 in place of the relatively expensive LP22950 low-drop regulator. However, in that case the circuit should be powered from an external supply having a voltage in the 8–15 V range (such as a mains adapter), since the supply voltage available from the RS232 port is generally too low for reliable operation with a standard voltage regulator.



Programming activity is indicated by a red LED. The microcontroller to be programmed should not be inserted in the socket or removed from the socket while the LED is illuminated. The necessary general-purpose programming software is available as a console application suitable for use with common operating systems (Windows 95, 98, NT, ME, 2000 and XP). It can be downloaded free of charge from the *Elektor Electronics* website (March 2002 Free Downloads).

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