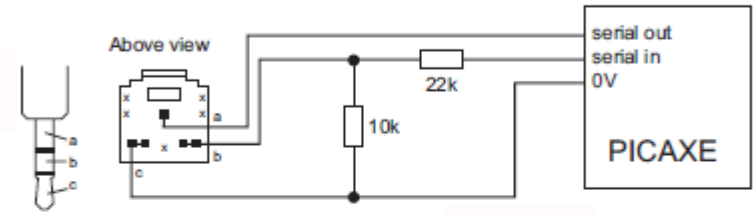
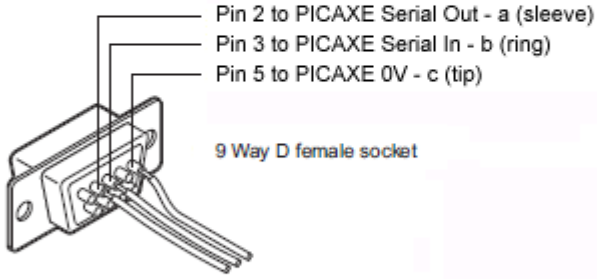
AXE026 Serial Download Cable

The serial download circuit is identical for all PICAXE chips. It consists of 3 wires from the PICAXE chip to the AXE026 serial cable. One wire sends data from the computer to the serial input of the PICAXE, one wire transmits data from the serial output of the PICAXE to the computer, and the third wire provides a common ground.

The minimum download circuit is shown here.





Note that the two resistors are not a potential divider. The 22k resistor works with the internal microcontroller diodes to clamp the serial voltage to the PICAXE supply voltage and to limit the download current to an acceptable limit. The 10k resistor stops the serial input 'floating' whilst the download cable is not connected. This is essential for reliable operation.

The two download resistors must be included on every PICAXE circuit (i.e. not built into the cable). The serial input must never be left unconnected. If it is left unconnected the serial input will 'float' high or low and will cause unreliable operation, as the PICAXE chip will receive spurious floating signals which it may interpret as a new download attempt.