



2.6.3 Connecting the Slide Switch

The *Slide Switch* has two rows of three contacts each, but we are using only one row here. Prepare 3 pieces of the single black wire of and strip them at both ends. Solder one end of these wires to the *Slide Switch*. The other ends should go to the pads marked **B**, **C** and **N** at the top of the PCB (to the right of the Voltage Regulator). The centre contact of the switch must be connected to the pad marked as **C**.

If you don't want to use a switch: don't worry. You may use a short piece of wire to connect the **C** terminal to the **B** terminal if you're going to use a battery, or between **C** and **N** if you're going to use an external power adapter.



2.6.4 Connecting a battery

You may connect a battery to the (+) and (-) terminals at the top left of the board. These terminals have the word 'Battery' printed in between them and they are located to the right of the of the *Adapter* terminals we've discussed before. Paragraph 2.7 shows how to connect the battery: the *red* wire should go to the pad marked as (+), whilst the *black* wire should be connected to (-). Put the switch in the 'B' position to turn the *Enigma-E* on. In the 'N' position, power will be drawn from the external power adapter or, if no external adapter is used, the *Enigma-E* will be switched off.

The *Enigma-E* consumes about 20mA. A standard 9V block battery will last for about 6 hours!

2.6.5 Wiring the serial port

Connecting the serial port is not necessary for a correct operation of your *Enigma-E*, so you may want to do this at a later stage. However, it may be nice to be able to send and receive encrypted messages to and from another *Enigma-E* or a PC. If you want to use the port, you need to connect an (optional) 9-pin sub-D female connector to the pads marked TxD, RxD and GND. These pads are located at the top right of the PCB.

- Pin 3 on the serial port of a PC always carries the TxD signal. This signal comes from the PC and should go into the RxD line of the *Enigma-E*.
- Pin 2 on the serial port of a PC always carries the RxD signal. This line should be connected to the TxD line of the *Enigma-E*. This is the data that flows from the *Enigma-E* to the PC.
- Pin 5 on the serial port of a PC is always connected to ground (GND) and should be connected to the GND terminal of the *Enigma-E*.

The serial port of the *Enigma-E* runs at 9600 baud, 8 data bits, no parity and 1 stop-bit (often referred to as 9600, 8N1). At the PC-end you may use any piece of terminal emulation software (e.g. VT110, VT220, TeraTerm, HyperTerminal, PCCom, HearSay, etc.). Please note that you should turn handshaking off.

Users of a RISC OS computer are in an even better position: they may use the *Enigma Simulator for RISC OS*, described in paragraph 1.2 to connect their RISC OS computer directly to the *Enigma-E*.

2.6.5 Fitting the jumpers

For now it's best to leave the jumpers off, until we've tested the *Enigma-E*. The jumpers may be used at a later stage, to turn certain special features on or off. If you don't want to lose the jumpers, you may fit each of them to a single pin of the header (J1).

