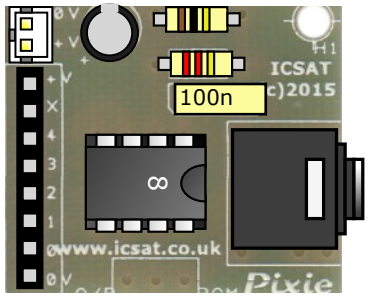


Pixie 8 mainboard

Introduction

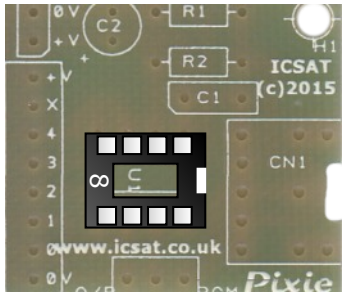
The ***Pixie 8*** is an all-in-one mainboard for projects using either PICAXE™ or Genie™ microcontrollers.

The ***Pixie 8*** is an example of the use of Programmable Components within D&T. The kit provides the main Programmable Component, the programming connection and a standard connection - ***Pixie Port***, which allows the connection to inputs/outputs and power. This allows the use of Pixie Dot add-on boards, own design PCB's, stripboard prorotypes or jumpers & breadboard.

- PICAXE™ or Genie™ versions
- 8 way ***Pixie Port*** connection
- PP3 battery snap for 3V/4.5V battery holder - AA or AAA
- The JST connector is the same as used on the BBC Micro:Bit battery boxes
- 30mm x 30mm

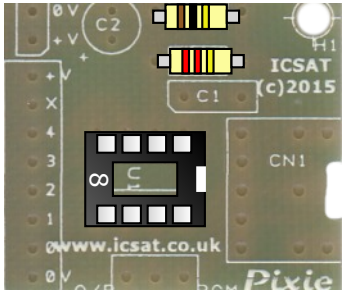
Assembling your *Pixie 8* mainboard

Solder on to the pcb the 8 pin DIL chip socket, with the notch matching the marking.



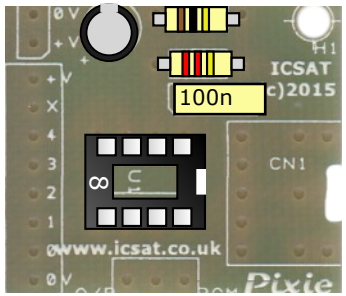
1

Solder in place R1 (10K), R2 (22K).



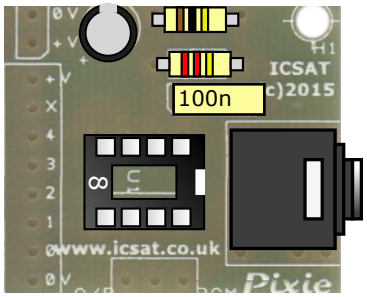
2

Solder in place C1 (100nF) & C2 (100uF) capacitors. It is important to make sure C2 is the correct way round - short lead is 0V.



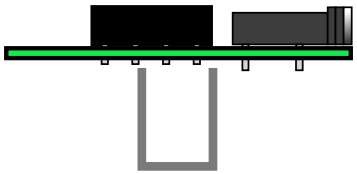
3

Now solder in place the 3.5mm stereo jack - downloading socket



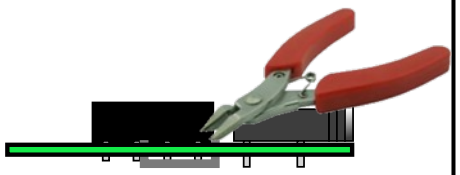
4

Solder in place a wire link, as the switch is no longer required. Bend a piece of wire that will fit thru' the 2 outer holes, push it thru' the holes from **underneath**. Solder it in place so it connects the 3 switch pads together and snip of the excess which is above the board.



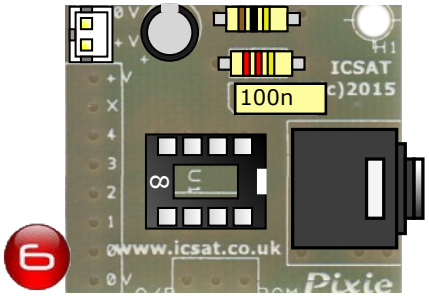
Solder it in place, so it connects the 3 switch pads together on the **underside** of the PCB

Snip of the excess wire which is **above** the board.



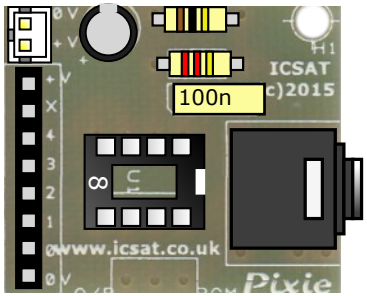
5

Now solder in place the JST 2-way connector for the battery connector. **Ensure** you have it the correct way



6

You can now solder in place the Pixie Port connector



7

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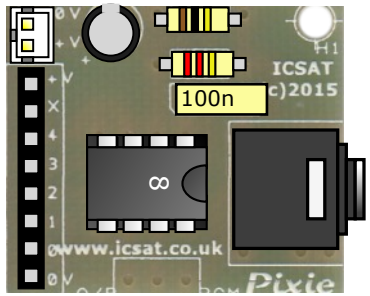
Pixie 8 Manual

Ver. 1.50

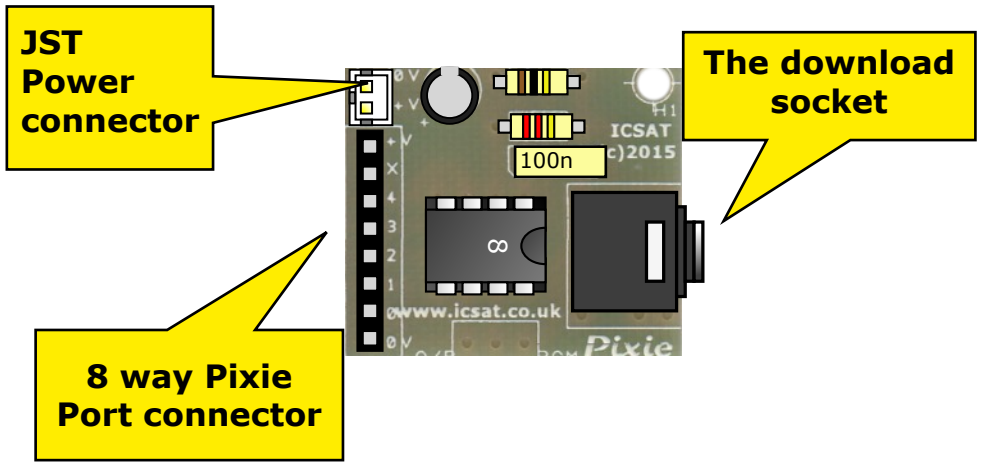
You now need to insert the PICAXE™ or Genie™ chip. Make sure the chips notch matching the notch on the DIL socket.



Using the *Pixie 8* mainboard

To operate your *Pixie 8* mainboard, you will need to use either the PICAXE Programming Editor or the Genie Programming Editor / Circuit Wizard 3, depending on your chip type.

Completed *Pixie 8* mainboard Reference diagram



How to connect my own circuit to the *Pixie 8* mainboard

Any circuit that is going to be used with the Pixie 8 mainboard is connected via the 8 pin ***Pixie Port***, We supply a range of add-on Dot boards, or you can develop your own PCB's , stripboard prototypes and/or jumpers & breadboard - the choice is yours!

See the pinout information for the function of each connection of the ***Pixie Port***.

Pixie Port connector pinout

The pinout for the Pixie Port is shown below:

Use
+V 3V to 5V, from PSU
Not used
I/O 4 - pin 3 of the chip
I3 - pin 4 of the chip
I/O2 - pin 5 of the chip
I/O1 - pin 6 of the chip
I/O0 - pin 7 of the chip
0V, from the PSU

Any standard 0.1" connectors, jumper etc will plug into the port.

Power Supply

The ***Pixie 8 mainboard*** is designed to use a 4.5V power supply, this can be easily obtained from a set of 3 x AA / AAA batteries or a USB 5V supply can be used.

Do not attached PP3 9V battery it will destroy your ***Pixie 8 mainboard***.

AA **AAA**

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