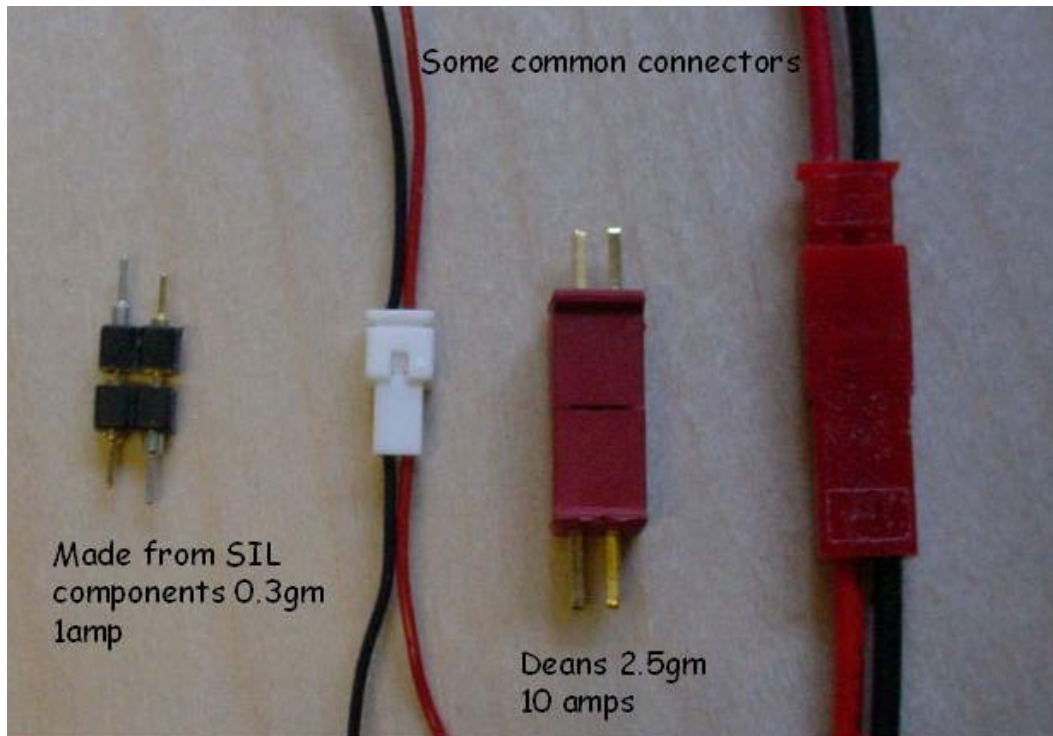


### Connectors for lightweight electric power systems

Electric power units derived from 4/6/7mm pager motors running on 50-120mah single cell LiPo need lightweight connectors. There are few options.....



Atomic Workshop  
JST 0.3gm 2amps(?)

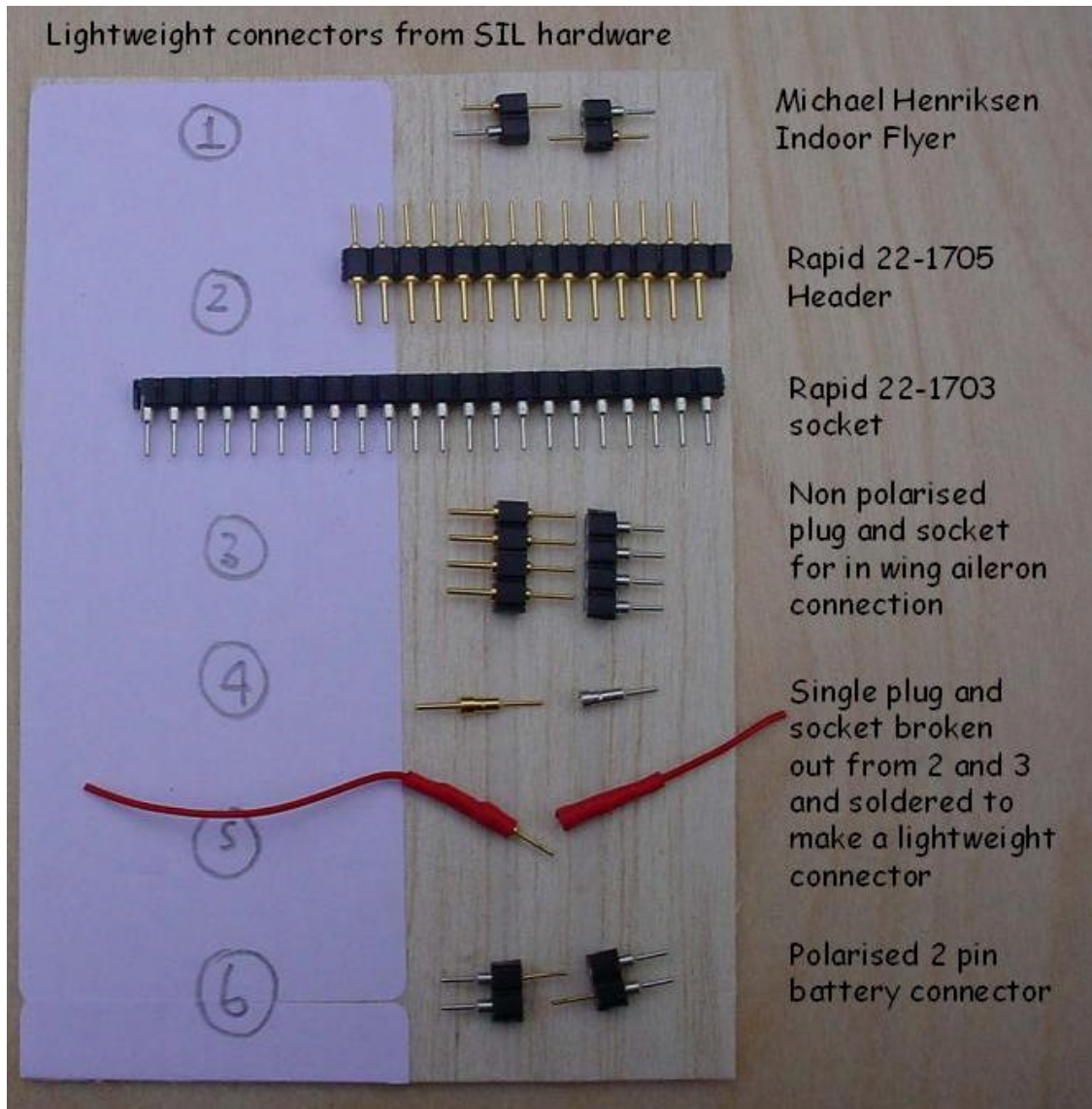
GWS connector  
2.2gm 4 amps

From left to right, made from SIL hardware and marketed by Michael Henriksen of Indoor Flyer. Light and 1 amp capable. Alas, this excellent company is not trading any more.

Atomic workshop plug and socket, light 2 amp capable but not cheap and stiff to plug and unplug.

The Deans and GWS connectors are far too heavy to contemplate for micro power systems.

There is hope however, using SIL hardware as Indoor Flyer, it is possible to make connectors for no more than a few pence a pair.



First step is to procure 'header' 22-1705 and 'socket' 22-1703 from [www.rapidonline.com](http://www.rapidonline.com). They have a minimum order policy so club together and order for your mates as well.

You can make a 4 pin non polarised type 3 combo by snipping off lengths from 2 and 3.

Break out pin and socket, 4, by snipping away with a good sidecutter and assemble as 5 giving a perfectly serviceable single wire connector, OK for 1 amp.

Make a polarised 2 pin connector by snipping off a pair of items from 22-1703 socket and using 0.7mm gold plated jewelry wire to make a pin and insert into a socket.

There is an alternative to the above.....

Snip off a 2pin pair from 22-1703 socket and remove one socket by pressing down on a hard surface. Strip out one pin from 22-1705 header. Lightly ream the 2 pin socket using a watchmakers tapered reamer, until the pin enters the hole made in the 2 pin socket pair. A dash of CA to secure. This is my preferred method of assembly and is, I suspect the methods used by Michael Henriksen late of Indoor Flyer.

#### Finishing touches

#### Heatshrink

Treat your installation to some decent insulation. I have the following heatshrink sizes in my workshop in red and black. These will cover 95% of your looming requirements.

1.2mm 407523

1.6mm 407525

2.4mm 407530

3.2mm 407535

The part numbers are Robotbirds

#### Looming wire

Please do not suffer your power unit to endure automotive style inflexible wire. Treat yourself to silicone wire and you will never look back. The options are.....

0.25mm<sup>2</sup> silicone wire OK for up to 2 amps 407611

0.50mm<sup>2</sup> silicone wire OK for up to 7 amps 407621

1.0 mm<sup>2</sup> silicone wire OK for up to 18 amps 407641

The part numbers are Robotbirds

#### Connectors for higher powers

Whilst you are rooting about in Robotbirds for wire and heatshrink have a look at the following 'banana' connectors for higher current draw.

407351 0.8mm connectors OK for 2 amps

407335 2.0mm connectors OK for 5 amps

407641 3.5mm connectors OK for 18 amps