HOW TO USE CONDUCTIVE THREAD

- **High Conductive** thread is suitable to be used as either top thread or underthread.

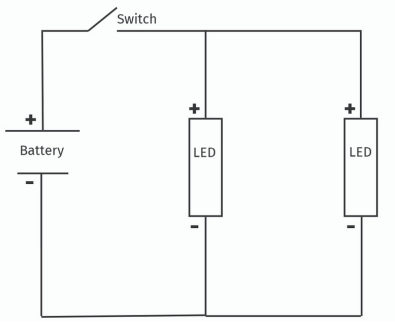
- It is vital that there are no thread breaks in the stitched circuit and ensure the stitching does not make contact with any other stage in the circuit. Stitching should be done in parallel, ensuring all positive terminals are connected to positive and negative terminals to negative. (see diagram)

- Thread breaks or loosely stitched areas could lead to contact failure. Strictly adhere to the wiring guidelines to ensure a successful circuit. Testing the stitched circuit prior to final garment embroidery is recommended.

- Resistance ratings are used to calculate voltage drop over a certain distance. In basic terms a higher resistance means a dimmer LED bulb, especially when multiple LEDs are used over a long distance.

- The resistance rating for Madeira HC thread are as follows:
  HC12 - Resistance: <100Ω/m HC40 - Resistance: <300Ω/m.
  Maximum number of LEDs per battery unit: 5

- Wash garment inside out and place in a laundry bag. Gentle cycle 30°C using mild detergent. Do not use disinfectant, bleach or chlorine as this will damage the silver coating causing thread to lose its conductivity. Do not tumble dry or iron, not suitable for dry cleaning. **Always remove battery.**



BATTERY LIFE			
Large Batteries		Small Batteries	
No LEDs in circuit	Battery Life	No LEDs in circuit	Battery Life
1	10 hours	1	2 hours
2	5 hours	2	1 hour
3	3.3 hours	3	0.6 hours
4	2.5 hours	4	0.5 hours
5	2 hours	5	0.4 hours

Learn more:

Punch Book - Digitising for Embroidery design by Bonnie Nielsen

For more information go to **www.madeira.co.uk**

Madeira Embroidery Training Courses contact: **training@madeira.co.uk**

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