

Time of Your Light: Illuminating Electronics for Scouts and Guides

Help spark the
imagination of
future engineers



Chatsworth House Estate
26–31 July 2015

What is Time of Your Light?

"Time of Your Light" is a joint initiative between the Institution of Engineering and Technology and the Peak 2015 Scout & Guide jamboree. Our goal is to inspire thousands of young people to discover the excitement of engineering and technology. We will deliver an engaging, hands-on soldering activity over five days of camping at Chatsworth House Estate, Derbyshire, 26-31 July 2015.

Scouts and Guides attending Peak 2015 will be able to enjoy soldering their own electronic badge. The badges will light up and can be reprogrammed by the young people to flash with different patterns. Credit will be earned towards the Scouts' IET Electronics badge and the Guides' Scientist badge. With the generous support of dozens of businesses and individual volunteers, we will fulfil our vision for the badges to be brought together for the closing ceremony to form an amazing animated light installation.

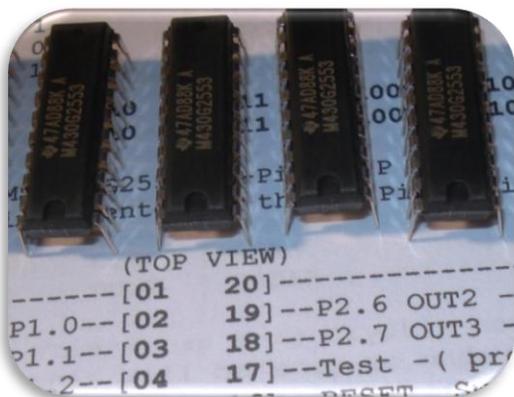


Why electronics at a Scout and Guide camp?

We all rely on electronics every day of our lives, but there is now a huge mismatch in the UK between the demand for engineers and technicians and the number of people qualifying in relevant fields. The IET and the Scouts and Guides associations recognise that initiatives such as Time of Your Light are essential to inspire the next generation. Plus of course, soldering your own programmable badge is great fun!

Scouting exists to actively engage and support young people in their personal development, empowering them to make a positive contribution to society. Girl Guiding has a mission to enable girls and young women to develop their fullest potential as responsible citizens of the world.

The Institution of Engineering and Technology aims to introduce a new generation to the sheer excitement of science, technology and engineering as a key part of our vision of "working to engineer a better world".



MSP430G2553 microcontrollers

Building on our shared goals and values, the IET has been working closely with the Scout Association over a number of years. In 2011 we jointly launched an all new Electronics badge, which we continue to sponsor. Last year, Peak 2015 (www.peakcamp.org.uk) invited the IET to join them as part of a drive to help Scouts and Guides engage with real engineers.

What are we doing?

The theme of the week at Peak 2015 is Time. **Flashing lights** is a great fit, as a timer circuit is needed to control the on/off sequence. And of course there is plenty of opportunity to show off the illuminated handiwork round the campfire!

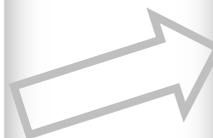
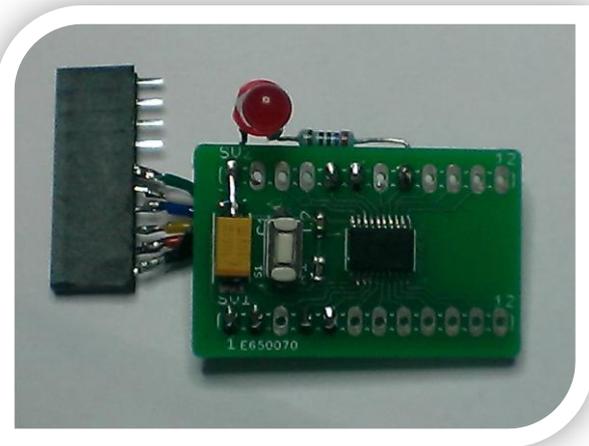
The circuit uses a **programmable** chip, which keen youngsters can optionally reprogram to flash **different patterns** (e.g. their name in Morse code). The chip also has a signal input. We aim to bring all the badges together on the final evening and create an **animated installation** related to the theme of Time.



Flashing badge with ID lanyard

Our activity will be aligned with the requirements of both the Scouts' IET Electronics badge and Guides' Scientist badge. The most difficult part of the Scouts' badge for a lot of young people to achieve is the requirement to **solder a circuit**, so we have designed the activity around supporting that.

Approximately 7000 young people will be attending the camp, of which 4000 will be involved in the various activities. Based on the organisers' experience and our research (including a successful trial activity in January) we expect to welcome **1000 participants** to the IET electronics activity over five days.



Prototype circuit board evolution

How can you find out more?

Find out more about IET education at:

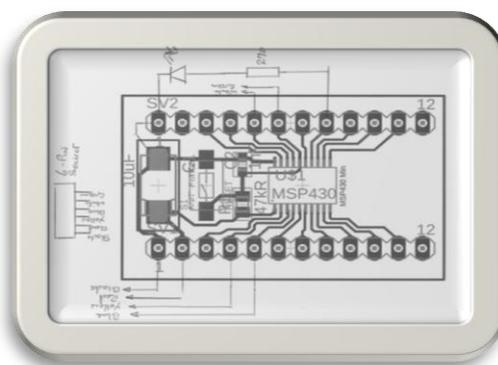
<http://faraday.theiet.org/>

Visit the Peak 2015 website at: <http://www.peakcamp.org.uk/>

Peak 2015 are on social media with Facebook ([facebook.com/peakcamp](https://www.facebook.com/peakcamp)) and twitter ([@thepeakcamp](https://twitter.com/thepeakcamp)), with over 2500 combined followers, a number which we expect to keep on rising right up until the camp.

The IET are on twitter: [@TheIET](https://twitter.com/TheIET) and [@IETFaraday](https://twitter.com/IETFaraday)

Please feel free to get in touch with us to express your interest in supporting us or simply to find out more about what we do:



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"Tents", "Scouts" logo, "Peak 2015" logo – The Scout Association

"Girlguiding" logo - The Guide Association

"Microcontrollers", "Flashing badge with ID lanyard", "Prototype circuit diagram", "Prototype circuit board evolution" – Paul Bennett, HIDECS Consultancy; Juergen Pintaske, ExMark

"Boy soldering" – Ian Cole <http://www.raisinggeeks.com/>



Concept, project delivery, electronic design & fundraising



HIDECS
Circuit design and testing, coding, volunteering, publicity and fundraising from the high integrity systems specialists



ExMark
Circuit design and testing, coding, volunteering, press, project marketing & major fundraising from the international technical marketing experts



Omflow
Concept design, project management, delivery and volunteer recruitment from the requirements experts

Huge thanks to all our commercial supporters and the many dedicated individual volunteers who give up their time freely. Without your help, "Time of Your Light" would never be possible.

Donors and supporters



Texas Instruments
Generous donation of 1000 MSP430 microprocessors (the brains on the badge!) from the global semiconductor leaders



EuroTech
Generous donation of 1100 printed circuit boards from one of Europe's leading manufacturers



Chinese Manufacturing Solutions
Financial contribution from the experts in quality Chinese manufacturing



Electron Electronics
Generous donation of electronic components by this leading UK independent distributor

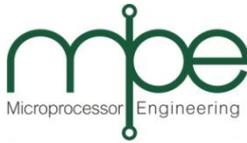


MSC Technologies
Donation of 1500 LEDs from this leader in electronics and lighting



James Dyson Foundation
Generous donation of DC59 cordless vacuum cleaner to raffle from this organisation dedicated to encouraging young people to reach their engineering potential

Donors and supporters



Microprocessor Engineering

Microprocessor software for the flashing badge from the company that helped land Philae on a comet!



Westwood Rock

Financial contribution from "the creative engineering company"



FTDI Chip

Donation of USB to TTL cables to connect to the PC from the USB chip company



Gateway Electronic Components

Donation of 1000 LEDs from this component distribution experts



Eurocircuits

Generous donation of printed circuit boards from the online PCB prototype and small series specialist



Spinnaker

Financial contribution by the market leader in electronic cash protection systems



NLT Training (Chesterfield)

Soldering training for volunteers from one of the region's leading training providers



Esprit Electronics

Donation of components from a leading UK provider of electronic manufacturing services



Coilcraft

Donation of magnifying glasses from this world leader in inductor coils



University of Derby

Loan of soldering equipment and volunteers from Derbyshire's award-winning university



Rolls-Royce

Loan of soldering equipment, plus volunteers from this world-beating engineering company



Dok-Tek

Generous donation of LEDs by this specialist in innovative, high reliability LED Signs



PACE Worldwide

Loan of soldering equipment from a world leader in assembly and repair of electronics



Direct Insight

Financial contribution from the experts in innovative solutions for electronics

Donors and supporters



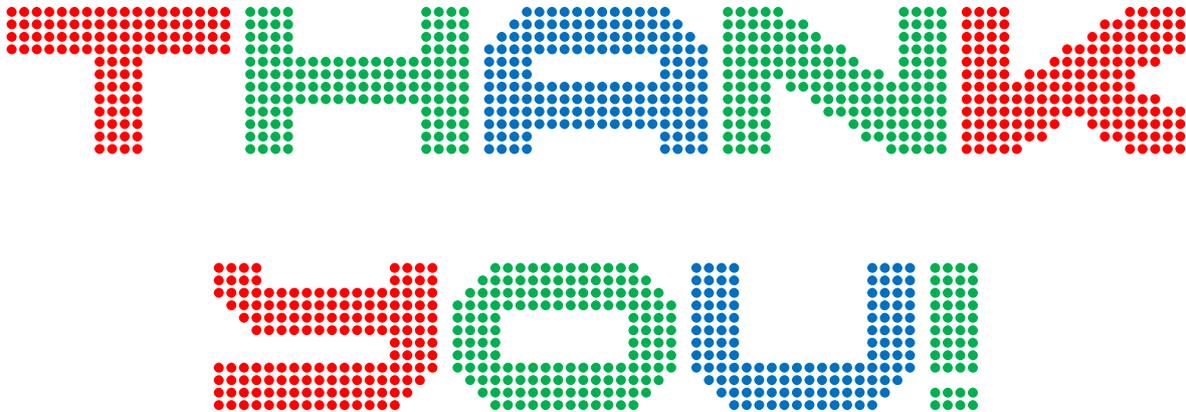
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and services since 1973



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from this pioneer in
lowest power, multi-
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Samtec
Donation of header and
connector components
from a world-leading
manufacturer of
interconnect solutions



Special thanks for their major contributions to Ralf Lieb (PCB layouts), Michael Kalus (software), Dirk Bruehl (software)

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