Scorpio Technology

NEWSLETTER

INSIDE THIS ISSUE

Our office will be closed from 3 p.m. on the 20th December 2019 until 9.00 a.m. 20th January 2020 Please contact our sales office by email.

TEACHER CONFERENCES & WORKSHOPS

Scorpio is attending or supports these Design & Technology teacher activities:

DATTA VIC - Friday 21-02-2020 *Workshop*: Build your own Infrared, Remote controlled, STEaM Model
DATTA QLD – 25/26-06-2020 *Creative Integration*, Brisbane Convention & Exhibition Centre, Sth Brisbane
DATTA WA – 03-07-2020
ITE (NSW) – 25/27-11-2020

WELCOME

As the end of the 2019 academic year approaches we are all looking forward to taking a well deserved break.

All of us at Scorpio Technology wish you, your family and students a safe and enjoyable holiday.

2019 – IN REVIEW

AS 2019 DRAWS TOWARDS ITS CLOSE, we've been reflecting on Scorpio's busy year. A few examples of these include:

- continue to update and improve teaching units
- meeting you and introducing our exciting project range at Design and Technology Teacher **Conferences**:

May	DATTA Vic
June	DATTA QLD
November	ITE (Sydney)
December	DATTA Vic Makerspace

 Thank you for taking the time to stop and chat with us. Your questions and feedback help us develop new ideas and improve existing kits.
- In July Pat McMahon participated in the DATTA WA conference on our behalf. He presented his Micro Controller series making a mini juke box project. Great feedback from all. Thanks Pat!
- regularly adding **new products** to our range
- regularly updating **online Catalogues**
- new **Primary** school level kits from ScienceWiz, Pathfinder and many others
- introduction of **Physics** products
- **monthly newsletter** – by email and printable version on the website (Newsletter section)
- developing **new projects** for 2020

Thank you for the opportunity to work together with you this year. We look forward to assisting you again in 2020.

2020 – WHAT'S COMING?

We have some exciting projects in development for 2020. We'll let you know about them closer to the release date. So… stay tuned.

We have made the decision not to print catalogues for 2020. This is a sustainability choice as well as a practical one. Our product range has increased dramatically this year. Our online catalogues keep you updated with our full range. Our **NEW 2020 OFFICE HOURS** will be from 9 am to 4 pm week days.

ORDERS FOR 2020

Many teachers prefer to pre-order goods for 2020 classes. We offer two alternatives.

1. Place order and accept delivery before the end of the school year to get goods at 2019 prices. Payment of invoice in 2020. *(Best deal)* OR
2. Place-order for delivery at the start of the next school year at 2020 prices.

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This Month's Q&A Technology Tips: Electronics - wiring

Q: What are the normal wiring conventions, and why?

A: The standard wiring conventions for all battery connections is **RED** for POSITIVE and **BLACK** for NEGATIVE.

Q: Why should you use different coloured wires?

A: The reason to use different colour wires is that it makes it easier to follow wires for connecting items, and easier to trace wiring problems.
SUGGESTION: Use multi-stranded wires, as single stranded wires break off after they have been bent a few times.

Q: We would like to make a Christmas tree with blinking lights. Do you have any kits that could be used for this project?

A: To have the lights flashing or blinking does require a PCB of some sort, as it not practical to connect all the components with wires – to blink it needs transistors, capacitors, resistors, apart from the LEDs.

There are three possible ways to do this (listed cheapest to most expensive).

1) Use a **PROTOBOARD** to make your own circuit

2) Use the **SCORPIO CONSTELLATION KIT** using wires and more LEDS. This kit has ten outputs, so 20 LEDS (10 pairs of the same colours) could be run with wires to the tree.
- Seven of the outputs can run two LEDs, the last three already do run a pair.
- The pairs would need to be the same colour
- This PCB is a LED chaser, so to get a blinking effect the LEDs would need to be scattered around the tree, and only two LEDs would be blinking at one time
- This would require a Scorpio kit and ten green LEDs to make it work

3) Use **PAT'S 14M MICROCONTROLLER**. This is a Picaxe programmable unit and can:
- Run 10 lots of LEDs (not restricted to one or two), and each string must be the same colour
- Be programmed to blink as many strings as you want at one time
- Has a sounder, and could be programmed to play Jingle bells etc.
- Would require a Microcontroller kit (which includes 10 LEDs) plus any additional LEDs required, as well as a download cable.

MODEL SOLAR VEHICLE CHALLENGE – National competion was held at the University of Tasmania on the 30 November and 1 December 2019. Check out **Tasmanian Model Solar Challenge** for photos of the event. Scorpio's Solar panel 26 is still proving a winning choice!

CLEARANCE ITEMS

Check out the great Clearance deals in the Clearance Catalogue. Great deals for STEM classes. Many of these items are obsolete stock at massively reduced prices. Once they are sold they will not be replaced.

STEM, BIOLOGY, CHEMISTRY, CORFLUTE, PRIMARY KITS, MUGS and more.