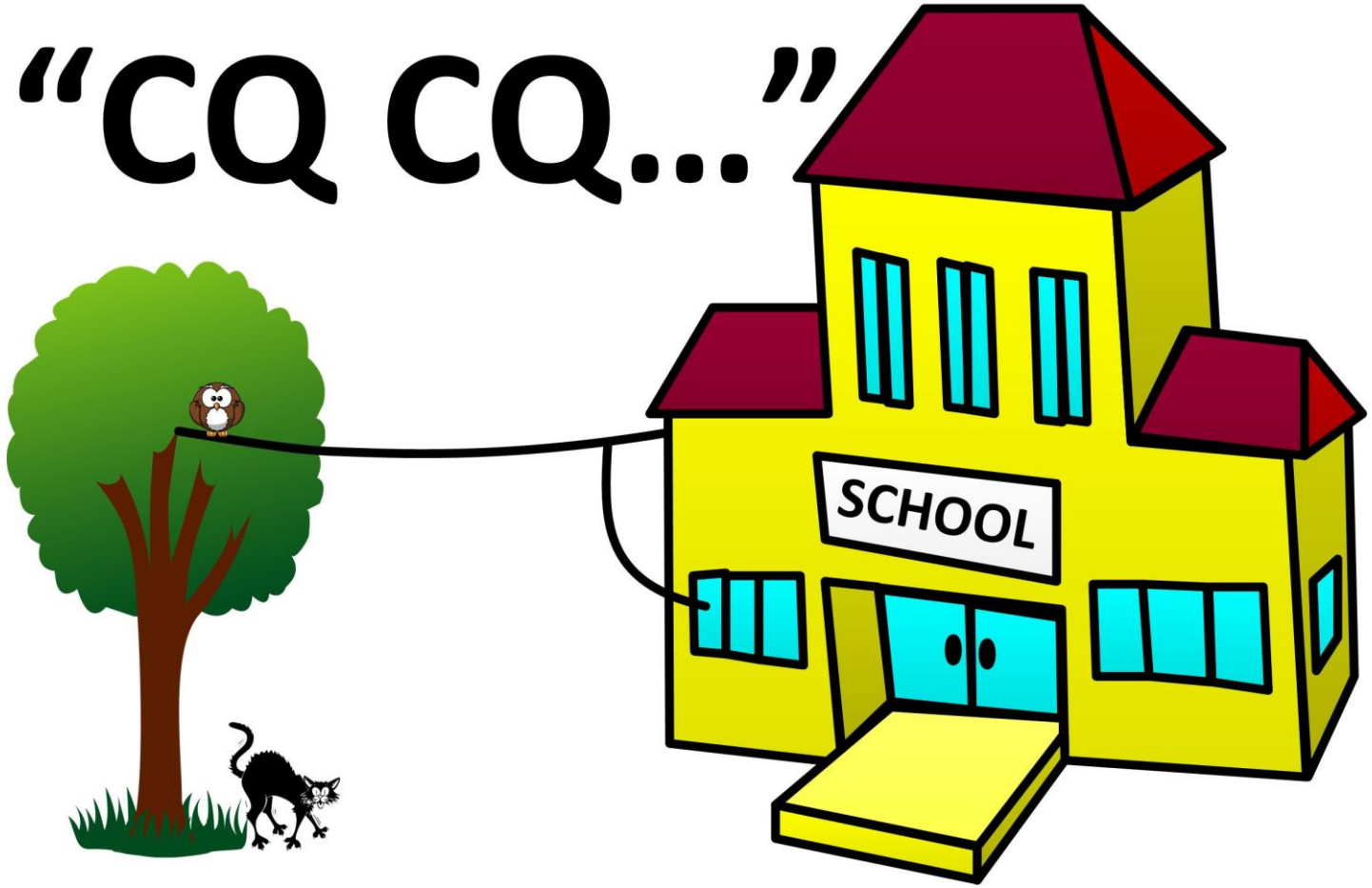
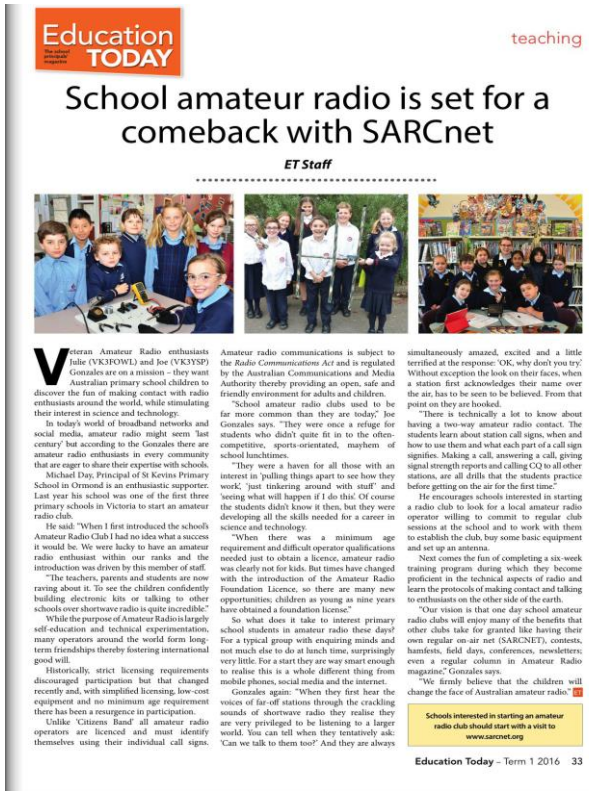
School Amateur Radio Clubs
By Julie VK3FOWL and Joe VK3YSP



School AR Clubs are back in business!



Education TODAY

teaching

School amateur radio is set for a comeback with SARCnet

ET Staff

Veteran Amateur Radio enthusiasts Julie (VK3FOWL) and Joe (VK3YSP) Gonzales are on a mission - they want Australian primary school children to discover the fun of making contact with radio enthusiasts around the world, while stimulating their interest in science and technology.

In today's world of broadband networks and social media, amateur radio might seem 'last century' but according to the Gonzales there are amateur radio enthusiasts in every community that are eager to share their expertise with schools.

Michael Day, Principal of St Kevins Primary School in Ormond is an enthusiastic supporter. Last year his school was one of the first three primary schools in Victoria to start an amateur radio club.

He said: "When I first introduced the school's Amateur Radio Club I had no idea what a success it would be. We were lucky to have an amateur radio enthusiast within our ranks and the introduction was driven by this member of staff.

"The teachers, parents and students are now raving about it. To see the children confidently building electronic kits or talking to other schools over shortwave radio is quite incredible."

While the purpose of Amateur Radio is largely self-education and technical experimentation, many operators around the world form long-term friendships thereby fostering international good will.

Historically, strict licensing requirements discouraged participation but that changed recently and, with simplified licensing, low-cost equipment and no minimum age requirement there has been a resurgence in participation.

Unlike 'Citizens Band' all amateur radio operators are licenced and must identify themselves using their individual call signs. Amateur radio communications is subject to the *Radio Communications Act* and is regulated by the Australian Communications and Media Authority thereby providing an open, safe and friendly environment for adults and children.

"School amateur radio clubs used to be far more common than they are today," Joe Gonzales says. "They were once a refuge for students who didn't quite fit in to the often-competitive, sports-orientated, mayhem of school lunchtimes.

"They were a haven for all those with an interest in 'pulling things apart to see how they work', 'just tinkering around with stuff' and 'seeing what will happen if I do this'. Of course the students didn't know it then, but they were developing all the skills needed for a career in science and technology.

"When there was a minimum age requirement and difficult operator qualifications needed just to obtain a licence, amateur radio was clearly not for kids. But times have changed with the introduction of the Amateur Radio Foundation Licence, so there are many new opportunities; children as young as nine years have obtained a foundation license."

So what does it take to interest primary school students in amateur radio these days? For a typical group with enquiring minds and not much else to do at lunch time, surprisingly very little. For a start they are way smart enough to realise this is a whole different thing from mobile phones, social media and the internet.

Gonzales again: "When they first hear the voices of far-off stations through the crackling sounds of shortwave radio they realise they are very privileged to be listening to a larger world. You can tell when they tentatively ask: 'Can we talk to them too?' And they are always simultaneously amazed, excited and a little terrified at the response: 'OK, why don't you try.' Without exception the look on their faces, when a station first acknowledges their name over the air, has to be seen to be believed. From that point on they are hooked.

"There is technically a lot to know about having a two-way amateur radio contact. The students learn about station call signs, when and how to use them and what each part of a call sign signifies. Making a call, answering a call, giving signal strength reports and calling CQ to all other stations, are all drills that the students practice before getting on the air for the first time."

He encourages schools interested in starting a radio club to look for a local amateur radio operator willing to commit to regular club sessions at the school and to work with them to establish the club, buy some basic equipment and set up an antenna.

Next comes the fun of completing a six-week training program during which they become proficient in the technical aspects of radio and learn the protocols of making contact and talking to enthusiasts on the other side of the earth.

"Our vision is that one day school amateur radio clubs will enjoy many of the benefits that other clubs take for granted like having their own regular on-air net (SARCNET), contests, hamfests, field days, conferences, newsletters; even a regular column in Amateur Radio magazine," Gonzales says.

"We firmly believe that the children will change the face of Australian amateur radio."

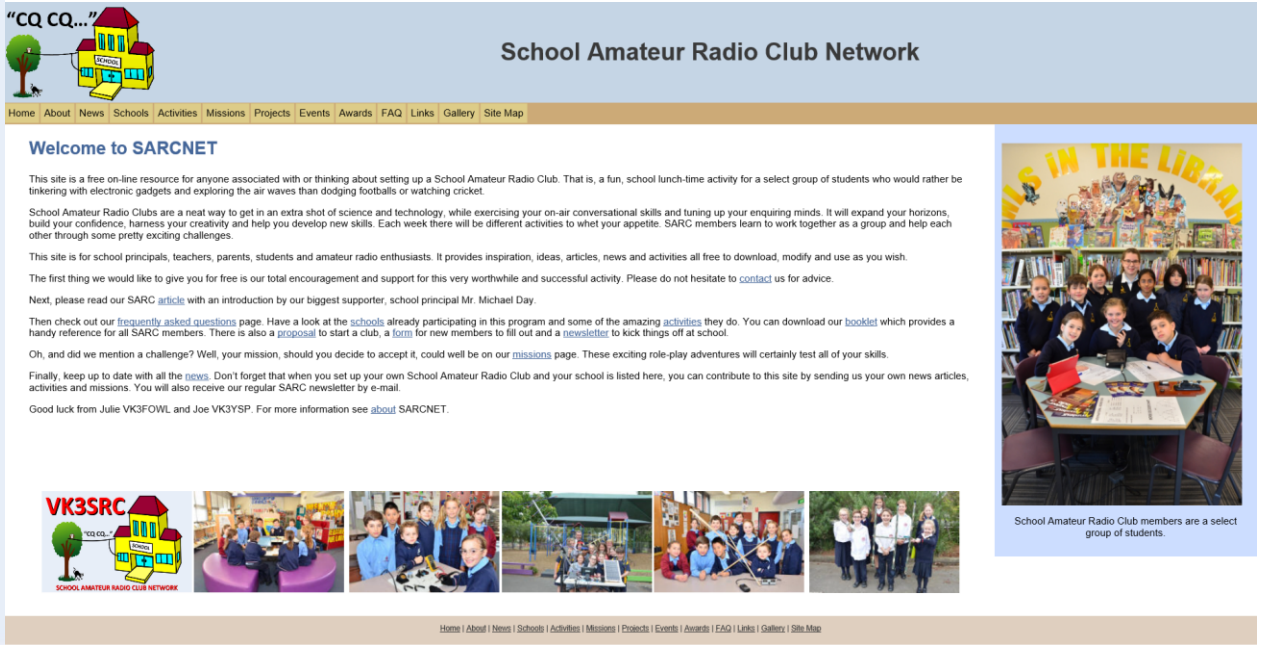
Schools interested in starting an amateur radio club should start with a visit to www.sarcnet.org

What is SARC?

- A fun, weekly, lunchtime activity
- A select group of students
- Promoting STEM using AR
- A first, positive experience of AR
- Not a Foundation Licence course
- Our focus is on Primary Schools

What is SARCNET?

- An extensive program for schools that anyone can use
- A lunchtime net for students: VK3SRC, 7100kHz LSB
- A website with free on-line resources: www.sarcnet.org



Introduction By Principal Michael Day

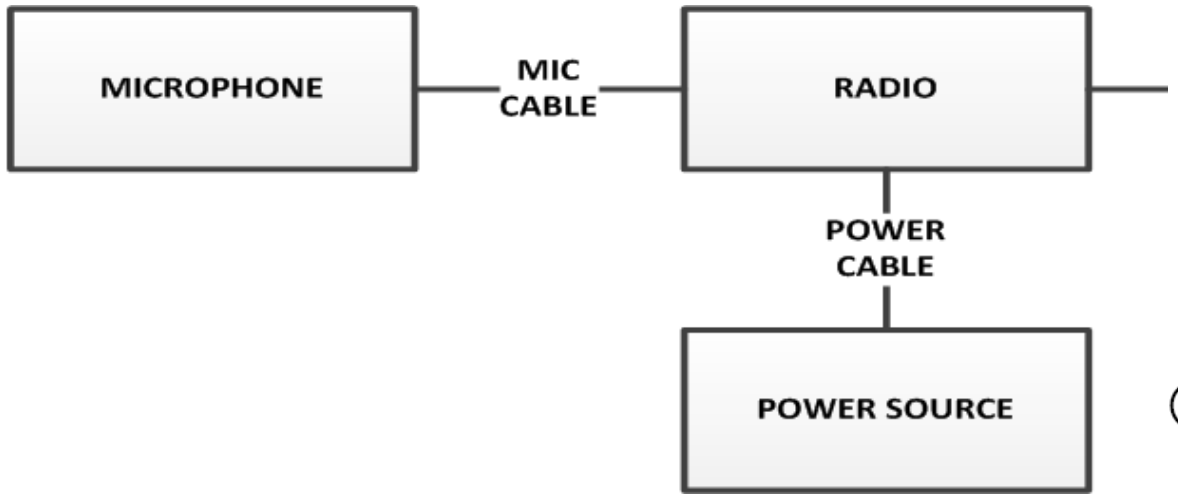
“It is interesting that in this day and age of mobile broadband networks and social media that Amateur Radio, the pioneering radio hobby of the last century, would be an excellent way of introducing science and technology to young children today. Amateur Radio enthusiasts are an amazing, untapped resource for educators. They are hidden away in every community, and can provide their own equipment and expertise. They also have a zeal to pass on this technology to the next generation. And, I would say, their aging ranks could do with some new recruits from us. So this largely free and enriching collaboration between the schools and the Amateur Radio fraternity is a classic win-win situation.”

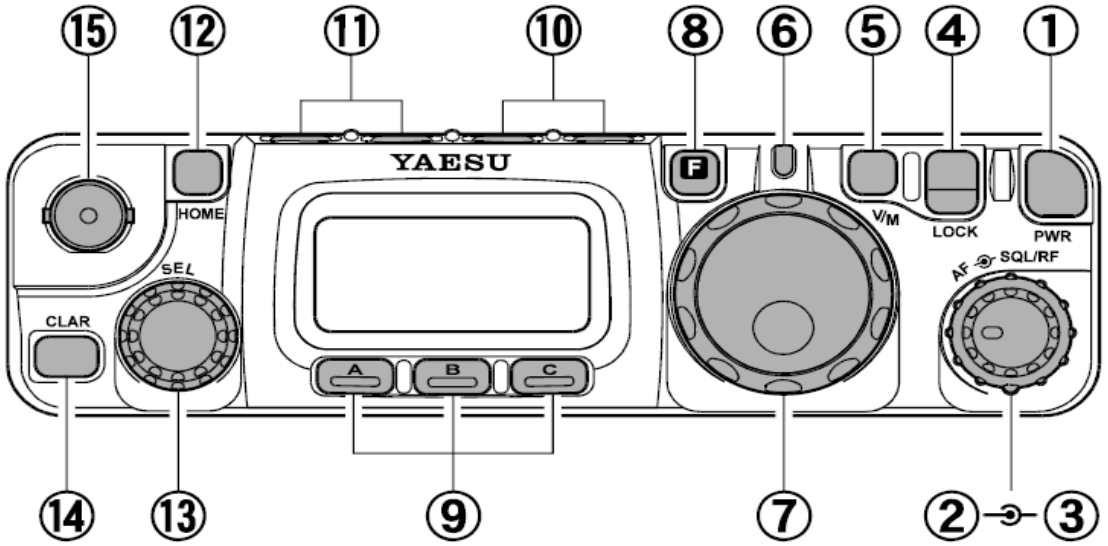
Is it worth it?

Setting Up

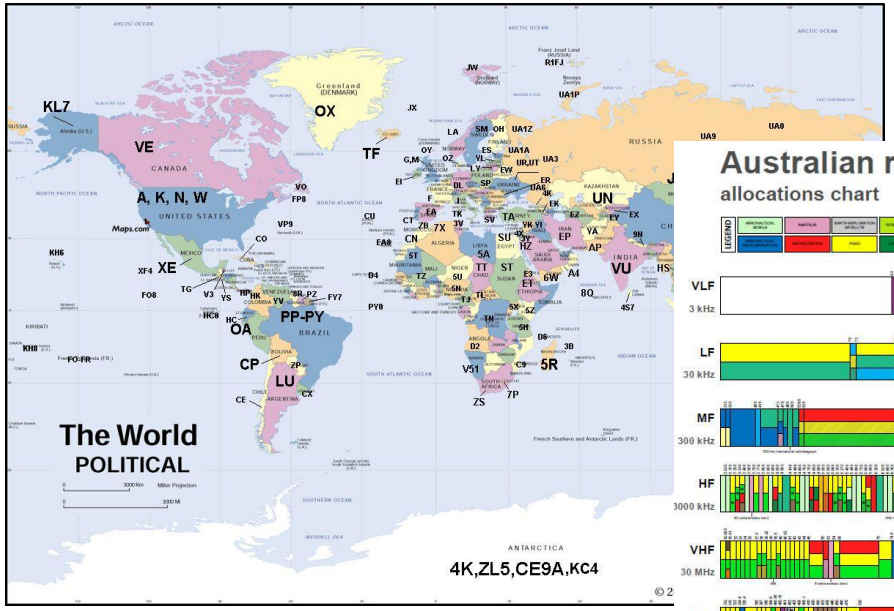
On-Air Sessions and Morse Code Practice

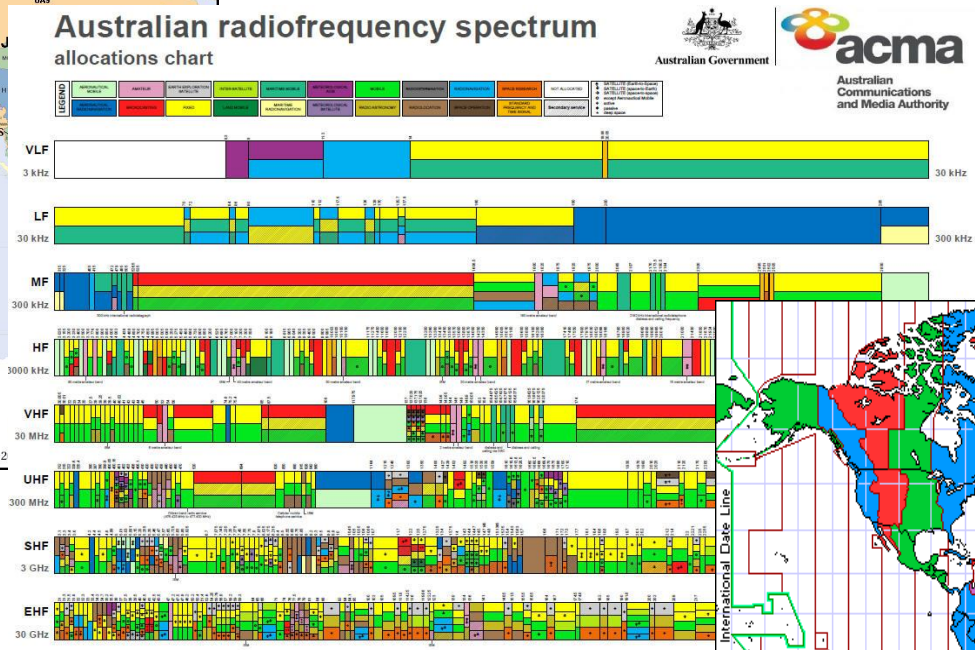
Station Setup and Radio Operation

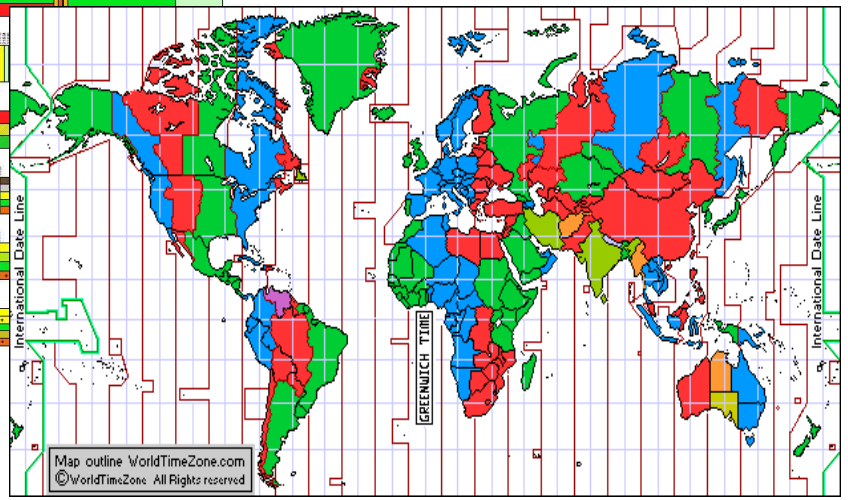




Call Signs, Bands and UTC







Radio Alphabet, Codes, Reports, Jargon

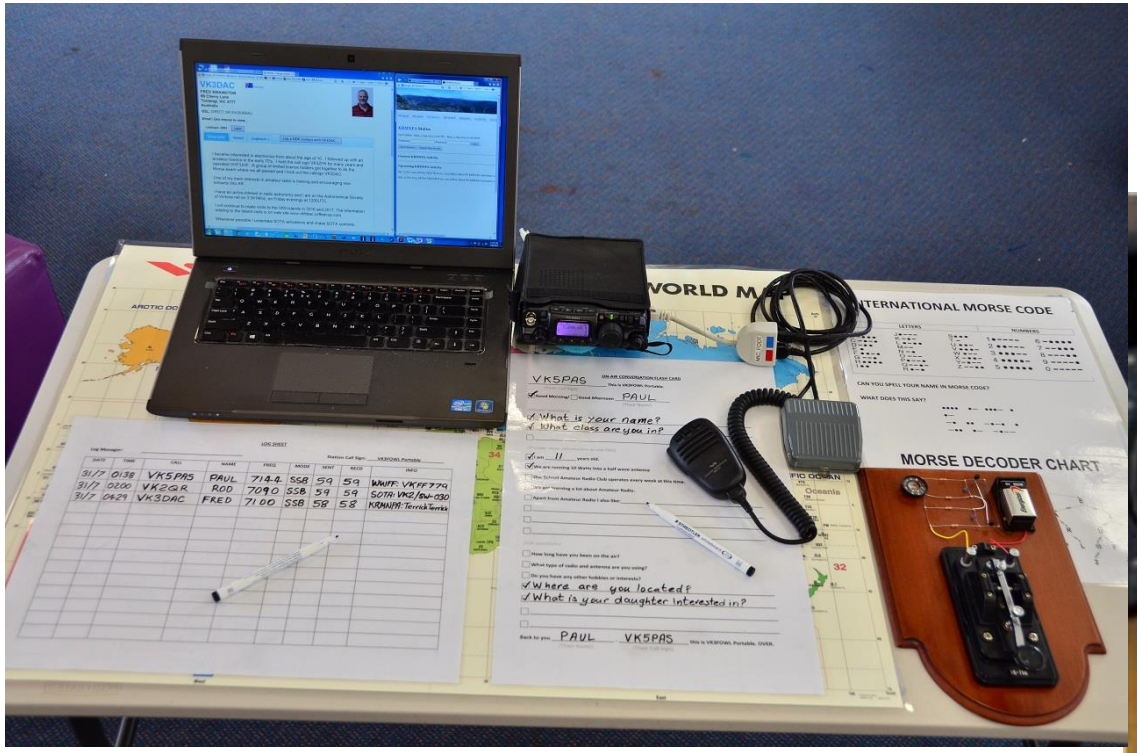
	CODE	SOUND
A	ALPHA	AL FAH
B	BRAVO	BRAH VOH
C	CHARLIE	CHAR LEE
D	DELTA	DEL TA
E	ECHO	EKK OH
F	FOXTROT	FOKS T

No.	Readability
1	Unreadable
2	Barely readable
3	Readable with diffic
4	Almost perfectly Rea
5	Perfectly Readable

Q-CODE	MEANING
QRM	Interference
QRN	Noise
QRP	Low power
QRT	Off and Clear
QRV	Ready to opera

Roger	Yes, OK
Negative	No
Over	Back to you
Copy	Heard and understood
Rig	Radio Transceiver
Eyeball	Face to face meeting

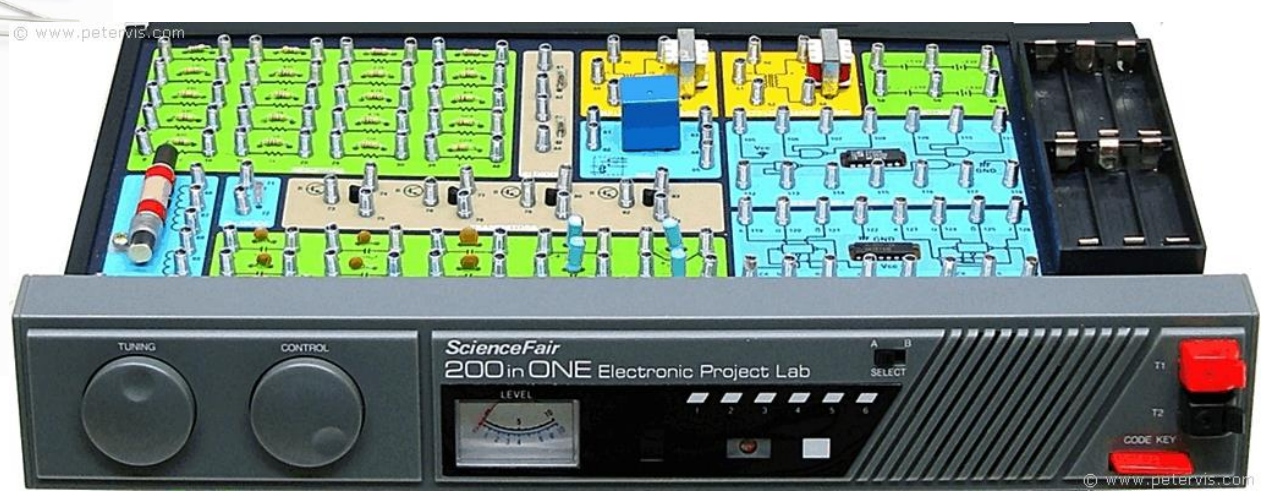
Operating Procedures and Logbooks



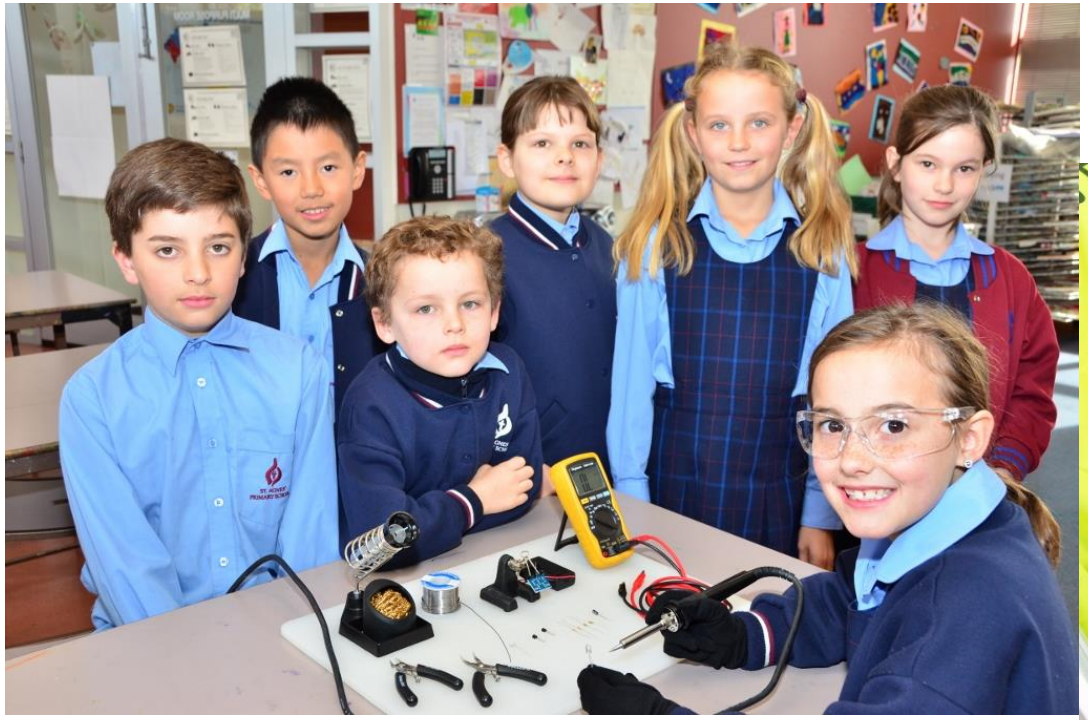
Satellites and Repeaters

Hidden Transmitter and Interference Hunts

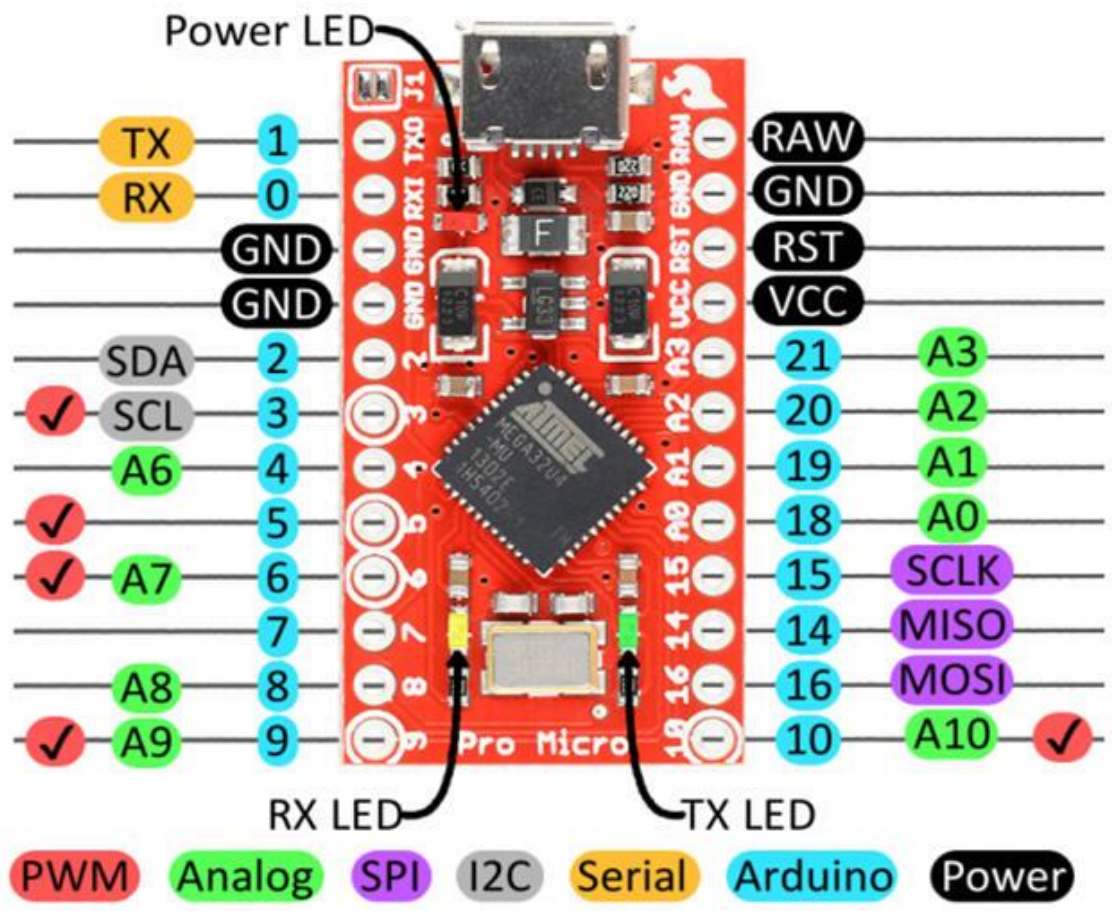
Electronic Components



Electronic Kit Construction

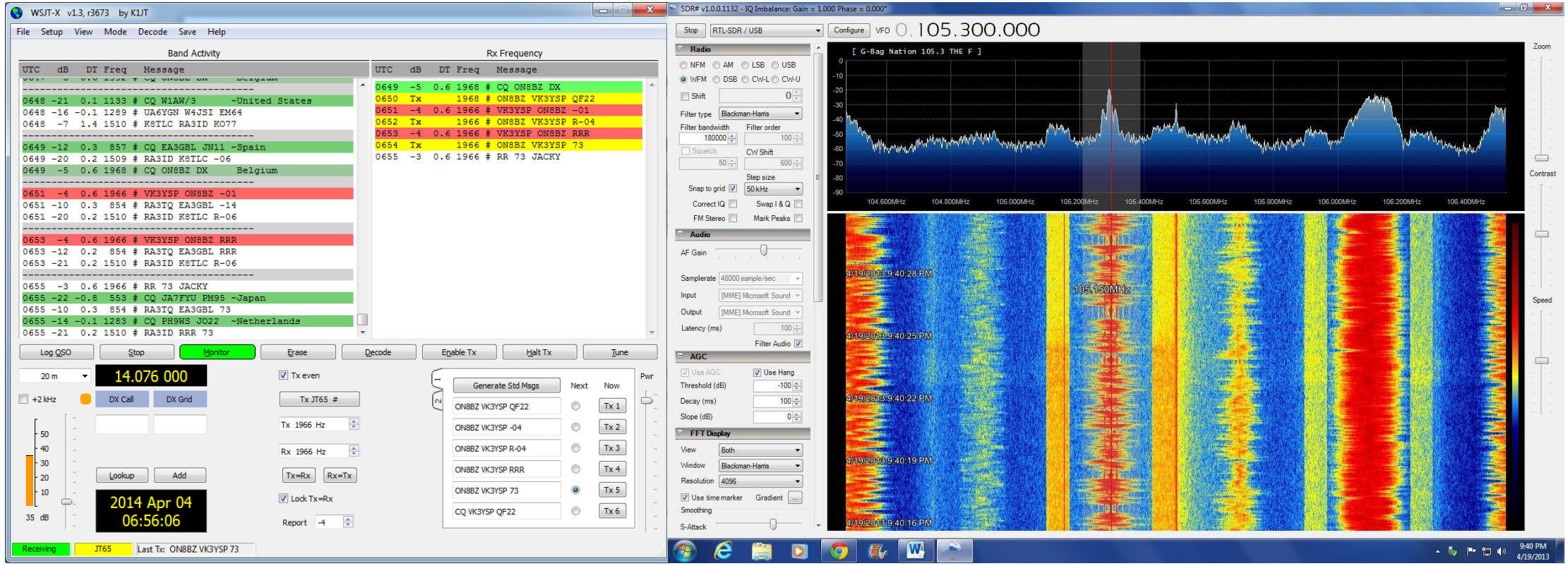


Microcontrollers & Renewable Energy

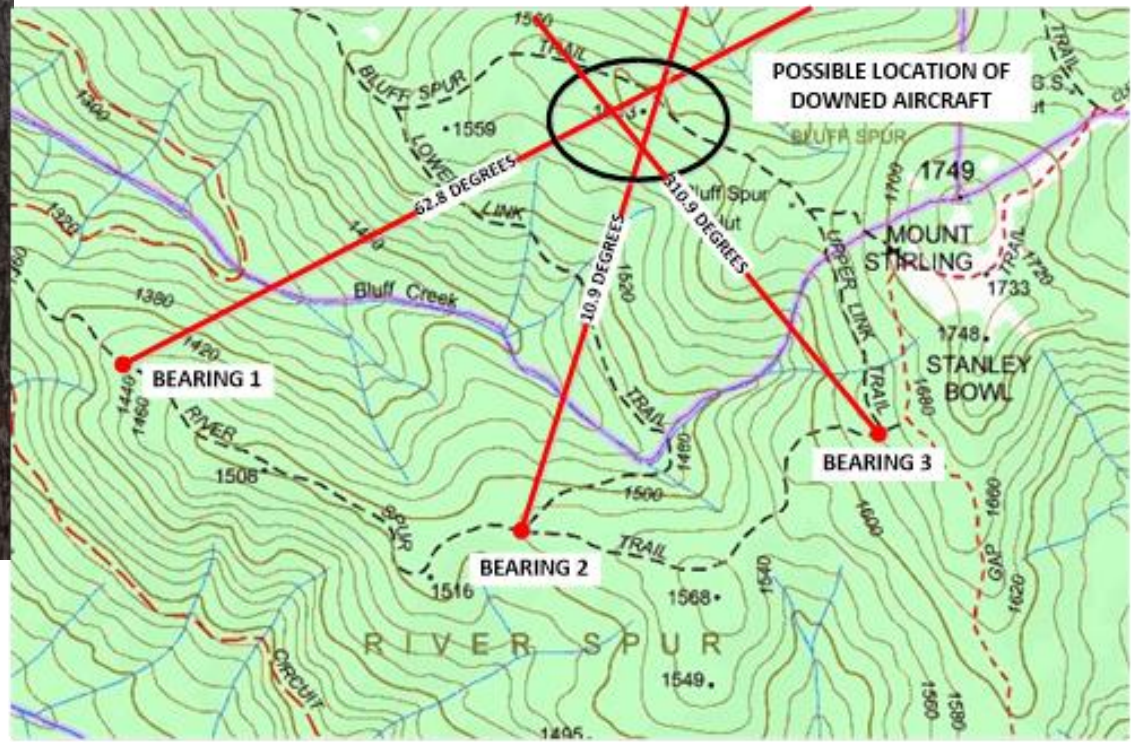


Antenna Construction

Digital Modes & SDR



Search and Rescue Mission



High Altitude Balloon Launch

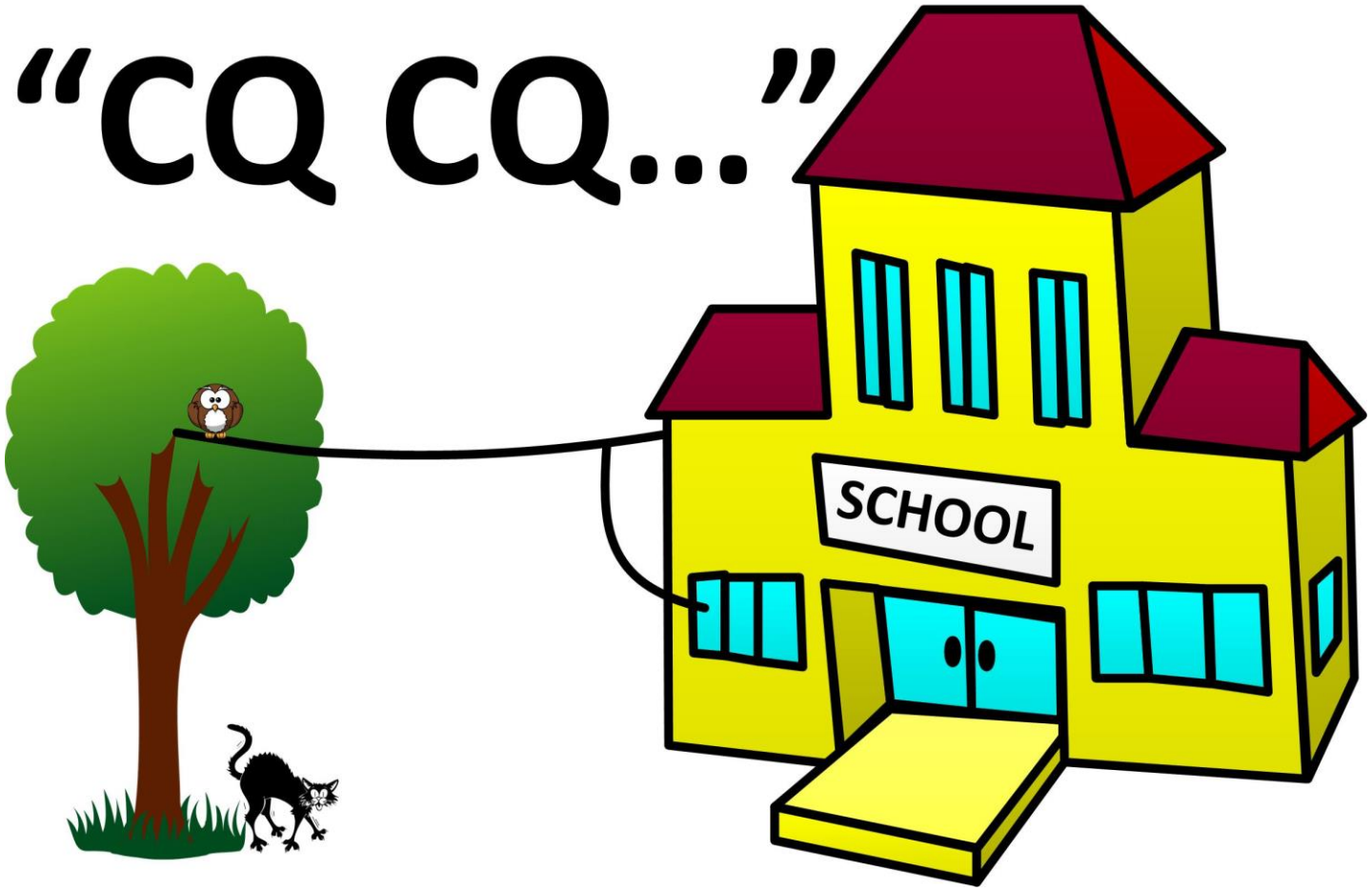
What can you or your club do?

- Start your own School Amateur Radio Club!
- Get your AR club to start one or to sponsor you
- Talk to school principals and teachers about SARC
- Provide free AR club membership for all students
- Run weekly AR club workshops for students

Conclusion By Principal Michael Day

“When I first introduced the School Amateur Radio Club at St. Kevin's Primary School in Ormond Victoria, I had no idea what a success it would be. We were lucky to have an Amateur Radio enthusiast within our ranks, so the introduction was initially driven by this staff member. The teachers, parents and students are now raving about it. To see the children confidently building electronic kits or talking to other schools over shortwave radio is quite incredible. I am now exploring ways to expand this program.”

The End – Thank You!



SARCNET – VK3SRC website: www.sarcnet.org email: info@sarcnet.org