QUA FARC JANUARY 2023

Franklin Amateur Radio Club Inc. NZART Branch 10

VOLUME 31 ISSUE 1

Next Club Meeting

Our next monthly general meeting will be Tuesday 17 January at 7.30 PM in the clubrooms at 19 Stadium Drive, Pukekohe. We have no speaker for this meeting so be prepared to describe your last month's ham radio activities.

Space Teddy

There is nothing like a good idea and Ian Ashley ZL1AOX certainly had one when he volunteered to assist with communications in Forrest Hill School Space Teddy project in 2016.

Space Teddy flies over Auckland and Hauraki Gulf

Four successful launches later and Space Teddy continues to enthral and delight his ground crew. We were lucky to have Ian visit our Clubrooms December 20 and explain how Teddy flies – a masterful chat complete with GPS and temperature recordings colourfully embellished by Teddy's own photography from the troposphere. Cool one, Ian.

Car Club Rally

The South Auckland Car Club ran a car rally at Jacks Ridge, Whitford on the Hawkeswood Civil property at 339 Whitford Park Road, Sunday the 11 December 2022. Nine radio operators attended this event: Start, Finish, Clerk of Course (mobile) and 6 mid points. Our operators were Durlene ZL1UOM on Finish and Mike ZL1MFL on Delta. David ZL1DK (Papakura ARC) operated base station.

The whole area was only 1km square so a mobile car aerial and 10w radio simplex 2m rig proved sufficient for communications. Weather conditions were wet and muddy all day with power wash needed to remove mud from all cars after the event. Hawkeswood Civil track has many tight bends and several competitors left the track during rallying but no injuries were reported. Durlene and Mike commented the day was unusually rainy and muddy but enjoyable just the same.

Tight bend cornering at Hawkeswood Civil track - Mike Lee ZL1MFL

Minutes of Franklin Amateur Radio Club (Inc) General Meeting held at the clubhouse, Stadium Drive, Pukekohe
20 December 2022

Chairperson Gary ZL1WGL opened the meeting at 7.39

Attending: ZL1PX, ZL1WGL, ZL1BBZ, ZL1ULK, ZL1AMQ, ZL1GAC, ZLUOM, ZL1AOX, ZL1BQA, Wallace.
Apologies: ZL1TO, ZL1LL, ZL1TZP, ZL1MFL
ZL1BQA/ZL1WGL

Minutes of the November meeting.
The November minutes have been circulated in QUA, and were approved. ZL1PX/ ZL1WGL

Correspondence
Inward: Branch 03. Radio portable activity day, 1 January 2023.
Outward: Reply to Morris Register to say we would like to shift to Ngahere Road but this will be at council's pleasure.
The correspondence report was received. ZL1PX/ZL1BQA

Finance
Income:
Subscriptions ZL1PX, ZL1WGL, ZL1TZP, ZL1LL $80
Donations ZL1TO, ZL1BQA $50
Expenditure:
Power bill to 19 October $51.71 paid 1 November
Power bill to 19 November $51.11 paid 3 December
FMG insurance for cover $72,000, $648.88 paid 21 November
Reimburse expenses $20 paid 12 December
Gary ZL1WGL explained he asked FMG for a quote for $150k cover which was well over $1000, so we paid for the smaller amount.
Our term deposit currently earns 2.25% interest but BNZ will be offering 5.2% when deposit matures at end of December. Committee opinion is we try to have interest paid monthly or three monthly. Secretary asked to action more frequent interest payment with BNZ.
The finance report was received. ZL1PX/Zl1UOM

Reports
AREC: ZL1ULK reported on South Auckland Car Club Rally held at Jacks Ridge, December 11. Weather conditions were wet and windy. The course is heavily treed and in a small area. Radio conditions were excellent. Durlene noted other radio clubs wore AREC branded clothing.
Christmas Dinner: Papakura hosted a combined Franklin/Papakura event at 5 Croskery Road. A good spread for the money and enjoyed by all.

General Business
Jock White Field Day: Gary is happy to make his farm premises available as per last year.
Ted suggested we begin discussion on fund raising for new year.
Topics for coming meetings: Peter to approach ICOM supplier for chat on 'money no object' ICOM transceivers. (Ed note: Richard Binns from RWB will attend our Feb 21 meeting with presentation.)

Next General Meeting 17 January. Suggested topic, a round robin of amateur radio activities undertaken over December – January period.

Meeting closed at 2023 hours, followed by Space Teddy chat from Ian Ashley ZL1AOX.

Stories from the shack…

Donna Halper – Professor, Media Historian, Author

Once upon a time, back before women had the vote, a young girl named Eunice Randall lived on a farm in Mattapoisett, Massachusetts. She heard about this new thing called amateur radio, but her home didn't have electricity. Her brother's home did, however, so she would sneak over there to try to master Morse code and send out a message, hoping someone would hear her. By her own account, her early efforts weren't very good, but she really had nobody to teach her, plus girls were not being encouraged to learn technology back then (nor were they considered capable of learning it).

I am paraphrasing the story, but this is how it was told to me. One night, Eunice sent a message in Morse code, and she actually got a reply. But the person who received it mocked her, saying "Well, young man, you certainly need some code practice. You made some mistakes." Eunice was indignant. She messaged back, "I'm a girl, not a young man, and if you don't like the way I send, perhaps you could teach me instead of mocking me." The person who had just responded to her turned out to be Irving Vermilya, a widely admired (and well-known) ham radio operator. To his credit, he realized he had been unkind, and he offered to mentor Eunice. That was the start of a more than four-decades-long friendship, and the two went on to teach other young hams, both men and women, for many years. (Eunice and Irving also went on to radio careers, but that is a story for another day.)

Eunice Randall broadcasting over radio station WGI, Medford Hills, Massachusetts 1922.

Shack 2 …

Gerry Jurrens – Chicago ham radio enthusiast N2GJ

I was 15 and had a crush on a girl named Jessica whom I had seen at the weekly dance sponsored by the Catholic Youth Organization in my town of Somerset, New Jersey. I worked up the nerve to find out where she lived and went to her house one day to ask her out. She invited me into the foyer of her parent's house where I heard the sound of Morse code in the air! I asked her, "Is that Morse code I'm hearing? I learned it in Boy Scouts." She replied, "That's just my brother on his radio. He's probably talking to England or something." I was amazed: "Can you really do that?" She smiled and said, "Would you like to meet him?" And that was how I ended up becoming a ham! (P.S. I never did go out with her!)

Shack 3…

Also by Gerry Jurrens

My second story: I was commuting to my job about 15 miles each way from home. I had my first mobile 2 meter radio in the car, a 12 channel, crystal-controlled radio called the SBE-144. I had crystals for the local Princeton, NJ-area repeaters, and became active with the guys on the 146.46/147.46 repeater at the David Sarnoff Research Center. In the early 1970s, there were lots of male chauvinist pigs on the repeaters, sad to say. When I got a small 4-channel scanner for the kitchen, thinking that my non-ham wife could monitor my progress to and from work, she quickly realized that some of these guys needed an "attitude adjustment" as she was fond of saying. One evening, after monitoring a particularly egregious roundtable, she asked me how she could talk back to these fine fellows. I told her she would need to learn Morse code at five words (5 letters each) per minute and take an exam that tested her knowledge of basic electricity and regulations. She said, "Show me the way!" I helped her get her Novice and then her Technician Class licenses. It wasn't long before she became the female equivalent of Wyatt Earp, cleaning up Dodge City. Within a short time, the guys had their collective consciousness raised and the repeaters welcomed her as an equal. Sadly, her key went silent in 2013, but during her time as a ham, she made a big difference.

Gerry doing his best to help a community field day. Gerry's SBE 144 is shown below.

Shack 4…

Alan Wyatt - Business Owner and ham

When I was a novice, waaaay back in 1973, I had a very casual schedule with an elderly ham (in morse code of course) located in my same city. We 'chatted' a few times every Saturday or Sunday after noon on 15 meters. (It was the longest dipole I could put up in my neighbourhood). After about the 4th weekend he didn't make it. I just shrugged it off that afternoon. The next day, while reading the newspapers that I was supposed to be delivering, I noticed an article: Ham Radio operator killed by electrocution. Sure enough, my friend hadn't made it to the sked because he had tried tweaking his dipole on the roof of the apartment building where he lived. The time it occurred was about 10 minutes from our sked. There was an arc and that was it for the 70+ year old ham.

Be careful out there.

kawfey AKA NØSSC

Ward AKA N0AX and I were driving back from Dayton Hamvention. I'm driving his car.

We pull off at a rest stop in Indiana, and find a few other hams there. We sit and chat for a while, first guy leaves, a few mins later second guy leaves.

When we're getting ready to leave, I realize the car keys are gone. We look everywhere, on the picnic bench, on the ground, in the car, bathroom, pockets. We're going to be stuck here for a long time.

On a whim we turn on the 2m radio, which is thankfully directly wired to the battery (as they all should). We call out on 52 about our missing keys thinking that one of the guys might have taken them accidentally.

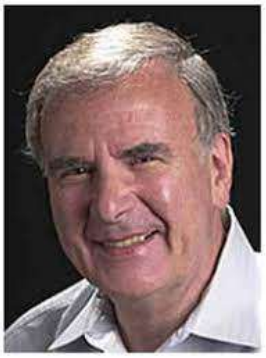
Second guy comes back, and says he doesn't find them, but will relay to first guy (assuming he's got 52 on too!)

HE DOES! First guy, too far for us to hear, hears the relay from second guy, and realizes he took the keys by accident! And he's on the way back! Phew. Ham radio saves our asses (and also got us there in the first place lol) and we make it home.

Apparently Ward's keys look just like first guy's wife's keys so mindless instinct kicked in.

Philosophy and Electronics

In 1971, an electronics engineer in Sunnyvale, California resigned from his job with Signetics Corporation. He wanted to write a book on philosophy. He also wanted to work on an idea he had for an integrated circuit. Although Signetics didn't do design work they liked his idea and agreed to pay him $1200 a month to develop it.



This engineer was Hans Camenzind. Hans travelled from Switzerland to the US in 1960 to attend Northeastern University in Boston. After graduation, he moved on to University of Santa Clara in California where he taught circuit design in the mornings and took a further degree in Business Administration in the afternoons.

As well as circuit design, Hans also started a career as a writer using the pen name John Penter. You can still see his books today on Amazon.

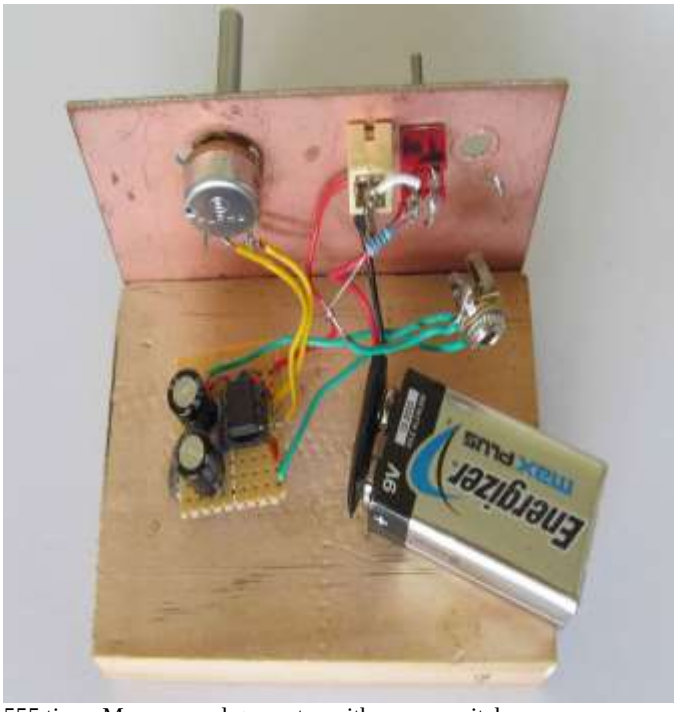
Hans' idea was an integrated circuit that would do several functions. Back then, big corporations didn't want integrated circuits because they saw this as competition for their single component products. Hans had a different view. Over the next twelve months, using breadboards, an Exacto knife and rubylith plastic, he worked alone to design the 555 Timer. He saw it as a labour-saving product which would reduce the need to solder components into a circuit by combining them in a single unit. Depending on how you wired it to its mother circuit, it would act as timer, pulse generator or oscillator. He reported later, "I wanted to make it flexible, that was the whole purpose, but I didn't realize it was so flexible".

NE555 timer

The 555 combined 23 transistors, 15 resistors and two diodes into an eight pin integrated circuit or 'chip'. Inside the chip these components are wired to create two comparators, a flip-flop, a PNP and an NPN transistor and an inverter. I can understand the comparators but have yet to understand how the flip flop works.
s.

It hardly matters. Designers found the 555 so useful that within a few years there were a billion of them manufactured each year. There was no copyright. Manufacturers just started making them when they saw the need. And the need was huge. They are still just as popular today. You might have a dozen or more in your household and not know it.

I used one of Hans' timers in December to make myself a Morse sound generator. This one generates a 500 to 1000 Hz tone in a set of headphones. Apart from the 555, there are three capacitors and two resistors in the circuit. I power it from a 9 volt battery. Although it will produce no tone unless the Morse key is pressed, it still draws current, so I engineered a turn-off switch into the circuit to conserve the battery. You can see my sound generator here. It's not pretty but it gets 100% for functionality.



555 timer Morse sound generator with power switch

Using this timer, I have been training myself to use a sideways paddle – also called a cootie. This is so I can participate in Straight Key Century Club contests where electronic keyers are banned and the operator must control spacing and characters. So far, I have made good progress with my cootie – but more practice is needed before I expose myself on the airwaves.

Hans Camenzind went on to build his own company Array Design which successfully produced analogue chips. He continued to write books. One of his titles 'Much Ado About Almost Nothing' describes what inventors did to make their discoveries, how they published them and how they were received. Hans' also lectured on inventors and you can see him here on YouTube talking about Ohm and his discovery of the relationship between current and voltage. (Sorry, I wasn't able to find any videos of Ohm.)

Hans died in 2015, at the age of 82. He has my thanks for the gift of his timer and his humanity in writing so eloquently about his fellow inventors.