



Smoke Signals

Newsletter of Fullerton Radio Club

February 2021

President's Column - February 2021

Where did all the radios go?

A few weeks ago, I started seeing rumors that Kenwood had ceased production of their fully-featured TH-d72 and TH-d74 handheld radios. I checked the Kenwood America website and both radios were still listed as current models. About a week later, various online ham forums started posting an announcement (in Japanese) from the Kenwood Japan website saying that as of December 2020 the TH-d74 had been discontinued. This was pretty surprising to me, as that radio only went on sale in the fall of 2016. That is a pretty short run for a radio. So, let's see if it is still possible to buy either of these radios. A quick check of the HRO website initially showed both TH-d72 and TH-d74 out of stock. A current search of the HRO, DX Engineering, and Gigaparts websites no longer mentions these radios at all. The Kenwood America site still shows them as current models.

Yesterday, I saw an announcement that Yaesu has discontinued production of the FT-DX3000 and FT-DX5000 transceivers. A couple of weeks ago Nikon announced that they would cease all camera manufacturing in Japan. So, what's going on?

The answer for the Kenwood radios (and maybe the Yaesu radios also) is connected to an event that occurred on October 20, 2020 in Nobeoka City, Japan. The Ashai Kasei Microsystems integrated circuit manufacturing factory was destroyed in a fire that took three days to extinguish. It turns out that AKM manufactured DACs, ADCs, Xtal oscillators, and DSP chips for many consumer devices, including ham radio gear, automotive parts, camera equipment and high end audio gear. AKM was apparently a single-source supplier for many proprietary chips. Ford, Toyota, Nissan, and Fiat-Chrysler have had to slow or pause production of several car and truck models. Nikon has ended camera production at their remaining Japanese factory. All of these announcements have occurred in the last eight weeks.

Other than the AKM fire, there are other supply-chain issues affecting chips used in many devices. Some

effects are due to COVID disruptions and some are related to import controls that the US government put on selected Chinese goods last year. But it seems the biggest disruption is being caused by the AKM fire.

AKM estimates that they will be back in business in about six months, but it could be up to a year before the supply-chain returns to normal. Meanwhile it looks like a number of manufacturers will choose to discontinue products rather than pausing production for up to a year.

Meanwhile, take good care of those old radios in your ham shack.

Best Regards,

Bob Houghton AD6QF

February FRC Meeting

The February Club meeting will again be presented by video teleconference using Zoom. Members will receive Zoom connection information by our Groups.io.

Meeting date: February 17 2021;

On ZOOM! 8:00 PM

This month we'll be having an informal discussion, targeting, among other subjects, anything you've been doing at your ham shack.

[Note: It's not easy to find presentations for every club meeting. But with all the talent we have within the organization isn't there someone who could volunteer to provide something interesting to the club? How about all the TAG group: What I see in Walter's report of TAG activities indicates numerous projects that could, with little extra effort, be turned into a good presentation topic. Wouldn't take that much extra work! Thanks in advance for your consideration.]

Fullerton Radio Club
P.O. Box 545, Fullerton, CA 92836-0545

Board of Directors

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Bob Houghton AD6QF
Email: bobhoughton@mac.com

Vice President

Paul Broden, K6MHD
E-mail: pbroden@sbcglobal.net

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T-Hunt

Joe Moell, K0OV
http://www.homingin.com
E-mail: homingin@aol.com

W6ULI License Trustee

Albert Solomon, AG6OF
E-mail: albertsolomon18@gmail.com

Newsletter Editor

Paul Broden, K6MHD
E-mail: pbroden@sbcglobal.net

March FRC BOARD MEETING

***The next Club Board meeting will be on
March 10, 2021 and will be conducted
using Zoom video conferencing
platform.***

5:40 PM

All Members are welcome.

MEMBERSHIP DUES

**It's mid-February, and membership dues are due.
Send your form and dues to Gene Thorpe at the
club PO Box. A renewal form is included with this
newsletter.**

Show –and–Tell

Bring something of interest to the meeting to show and share your story.
Something old, new, or just of interest to hams.

Web site: www.FullertonRadioClub.org

February Board Meeting Minutes

The February 2021 FRC Board meeting was called to order at 5:40 pm by Bob Houghton AD6QF via Zoom (Coronavirus). Others present: Vice President Paul Broden K6MHD, Treasurer Gene Thorpe KB6CMO; Secretary Linda Endsley KJ6IHB, Larry McDavid W6FUB; Robert Gimbel KG6WTQ and Walter Clark.

Minutes were approved.

Treasurer's report:

Checking - \$3,989.42; \$Savings - \$2,608.68. As of 1/13/20.
New deposits \$57.

New expenses: None

Old Business:

Renewals - 1 single and 1 family

17 paid and 3 life members as of 2/10/21

New Business:

Tom G has filed Federal and State tax document.

Our club is now tax exempt.

Membership – Bob will send thank/reminder email to FRC-OC group

Bob will renew club liability insurance. Expires 3/18/21. Cost about \$200.

Next board meeting: 10 March 2021

Adjourned at 6:20 pm

Submitted by Linda Endsley KJ6IHB

TAG Activity Report for February 2021

First the Annual Review of What TAG Meetings Are About

TAG or Technical Activity Group is an adjunct to the main meeting of the Fullerton Radio Club. It was started about 2009 by Bill Kohlenberger (W6ZJE, SK) and, for most of those years, at Dennis Kidder's house when he lived in Fullerton. Through those years, the main activity has evolved to going around the room (or around the Zoom Gallery) where each person talks about their projects or anything that would be of interest to **amateur scientists with an electronics background**. For those of us who do projects, it gives a kind of purpose to our work. To share something, is kind of what makes us humans. It is a joy as basic as telling a joke and finding the telling as much fun as hearing it yourself the first time.

As we go from person to person, each relates something of interest in a manner that allows discussion with the rest of the group. Walter, as the host, judges when the discussion has reached a natural end and asks the next person what's on his work bench. He also tries to be a diplomat in getting side discussions to stop so he can focus the group on taking turns.

When we meet again at Walter's house there's a cable that is dragged into the meeting room which is connected to a G5RV HF antenna. A variety of instruments and power supplies are available, but most important is a digital projector and screen for those that bring a flash drive presentation. In the Zoom version of the meetings, a presentation is even easier. It is encouraged to have on the computer's desktop, images or a Power Point presentation. If you see it on your desktop, the rest of us can see it too by just clicking on the green text at the bottom that says "share."

Of interest to the main Fullerton Radio Club members is that at these meetings we inspire or cajole each other into turning one of those interests or projects into a talk for the main club.

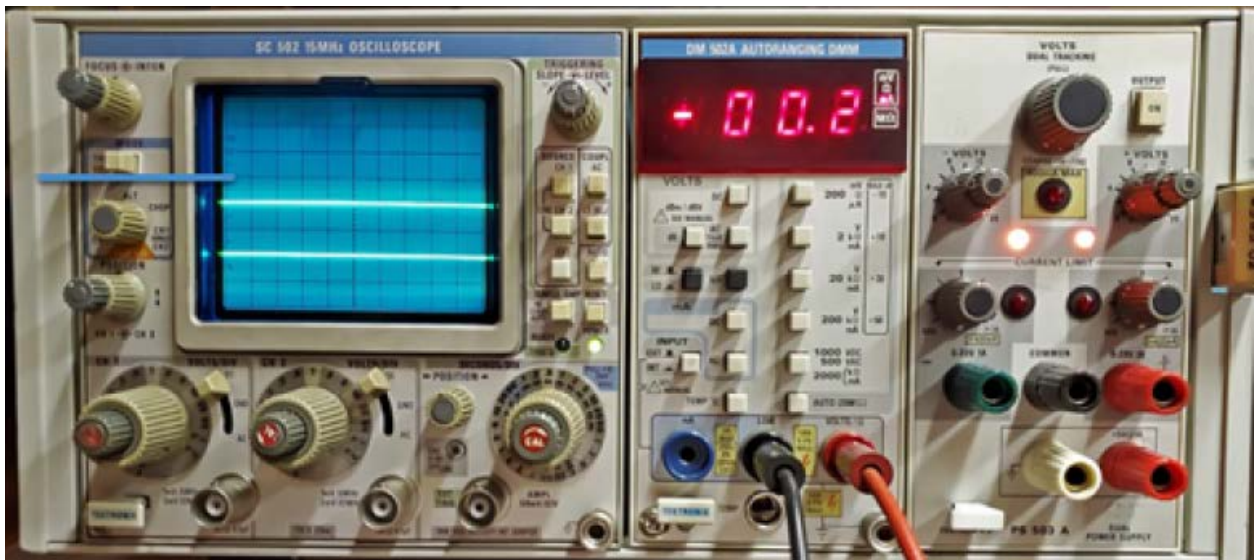
Pre-Meeting Discussion

Somehow we found ourselves talking about the youngest pilot and why pilots and ham operators don't have an age minimum like a driver's license.

Tom Hall was first up with his project which coupled his CW-key to a Arduino where software analyzed how well he was coding. It was featured in the January 2021 issue of QST...



Larry McDavid is in a club or support group of vintage Tektronix equipment called TekScopes, a large email forum list. He showed the way Tektronix modularizes their product. One module is a tester for others. The tester is for Tektronix TM500 1, 2, 3, 4 and 6-slot power supplies. It verifies each slot for power supply voltages, PNP and NPN pass transistor operation and phasing of ac transformer secondary windings. It's the module on the right in the picture below module on the right in the picture



One of their members created four circuit boards which when populated by parts will emulate the original tester. One of those boards becomes the front panel. He looked into sending Gerber file to a Chinese board maker and found the set-up fee to be in the hundreds of dollars and had the bright idea to see if there were any others that wanted to chip in on the set-up fee. Well, he found himself overwhelmed with orders. He ordered 75 sets of the circuit boards from China and distributed them to members of TekScopes, a large email forum list. He detailed for us the steps involved in dealing with shipping and handling. It was frightening. The whole project involved \$3,000 and hours of work.

Here's the whole Technical Activity Group. I captured it about 10 minutes in to make sure I got everybody. For those that don't attend Zoom meetings, you don't have to show up on time and you can leave for several minutes at a time, and nobody really notices.



Bill Webb gave a short presentation on a microcomputer that speaks Python. Where Arduino uses compiled C++ code (where the compiler is on your PC) the MicroPython, as it is called, is an interpreter that resides in the microcomputer for the more modern Python language. Bill said the error messages are better than the C++ compiler outputs for the Arduino. The interpreter takes more RAM, but memory is cheap nowadays. His presentation is available via OneDrive at . . .
https://onedrive.live.com/edit.aspx?resid=F1B60A320CA8CA65!144799&ithint=file%2cpptx&wdLOR=c6C7D4DF9-C1DD-4925-BD31-8FEC77706299&authkey=!APQrVMe0U_YSlqM



MicroPython started as a Kickstarter project. Now in its released form, it is free to all. I did not have to pay a dime for it or the software needed to use it. With the Raspberry PI microcontroller priced at \$4 and MicroPython free, it's a great platform for teaching youngsters (or oldsters) to code.

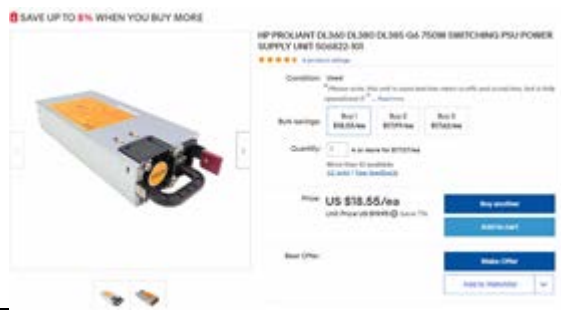
Next up was **Brooks Kachner** who recently joined an online Crystal Radio Club. From what I know of this group, they are very advanced in the electronics experience and take the technology of self-powered radio reception very seriously. It's the steam-punk of ham radio. He bought an LM386 and put the necessary components around it and then put it this box.



It's a simple audio amplifier so that the output of his crystal set doesn't need headphones. Apparently amplifying the output of a crystal set is OK with this club.

Leo Kim has been following a kick starter in a project called Flipper Zero. It is a portable multi-tool for pentesters and geeks in a friendly looking enclosure. It assists in doing digital stuff, such as radio protocols, access control systems, hardware and more. It's fully open-source and customizable, so you can extend it in whatever way you like.

I had to look up Pentesters. It is a penetration test, colloquially known as a pen test, pentest or ethical hacking, is an authorized simulated cyberattack on a computer system,



performed to evaluate the security of the system. Dustin also spoke on the transceiver that Leo is involved with.

Leo also shared with us some real bargains when it comes to used power supplies.

Tom Fiske has a project that had some bad traces on it. But the activity is most proud to be working on is helping Leo Kim's friend Dean Sym KN6WUV get his General. He's also working on his Extra and all he needs is an antenna.

Dick Palmer is working on an Arduino project. He had a friend in Seattle who wrote the sketches for his project. (Sketch is the C++ source code for the Arduino. Or rather for the compiler that is in your PC, that creates machine code for the Arduino.) The project is a controller for the tuner of a magnetic loop antenna. The antenna is a half meter in diameter and is handling a 100 watts. Since the tuner is on the voltage node, the capacitor has to be kind of big.

Walt



An interesting bit of information

Blessed Among Mankind

The current population of Earth is around 7.8 billion. For most people, that is a large figure. The large 7.8 billion number, however, was condensed into 100 persons and then into various percentage statistics. The resulting analysis is relatively much easier to comprehend.

Out of 100:

11 are in Europe
5 are in North America
9 are in South America
15 are in Africa
60 are in Asia

49 live in the countryside
51 live in cities

12 speak Chinese
5 speak Spanish
5 speak English
3 speak Arabic
3 speak Hindi
3 speak Bengali
3 speak Portuguese
2 speak Russian
2 Speak Japanese
62 speak their own language

77 have their own houses
23 have no place to live

21 are over nourished
63 can eat full meals
15 are under nourished
1 ate the last meal, but did not make it to the next meal

The daily cost of living for 48 is less than US \$2

87 have clean drinking water
13 either lack clean drinking water or have access to a water source that is polluted

75 have mobile phones
25 do not

30 have internet access
70 do not have conditions to go on line

7 received university education
93 did not attend college

83 can read
17 are illiterate

33 are Christians
22 are Muslims

14 are Hindus
7 are Buddhists
12 are other religions
12 have no religious beliefs

26 live less than 14 years
66 died between 15 – 64 years of age
8 are over 65 years old

If you have your own home,
Eat full meals & drink clean water,
Have a mobile phone,
Can surf the internet, and have gone to college,
You are in the miniscule privileged lot ... in the 7%
category.

Among 100 persons in the world, only 8 can live or
exceed the age of 65.
If you are over 65 years old, be content and grateful;
cherish life, grasp the moment.
You did not leave this world before the age of 64
years like the other 92 persons who have gone
before you. You are already blessed among
mankind.

(Provided by former club member Mike Maertzweiler, WA6TWD.
Source not identified.)

[Editor's note: I'd heard previously that there are more cellphones
than indoor toilets, but 75% of the world population with
cellphones? I've seen travel programs on TV where the people live
in mud huts, but have cellphones. Our club had a presentation
many, many years ago (early '80s?) where the presenter told of
Motorola's first prediction of cellphone sales at a potential of only
900,000.]

FRC Wednesday Net:

Reminder: We're continuing to conduct a 2-meter net on Wednesday evenings. All members, prospective members and friends are welcome. Raytheon repeater, 7:30 PM: 146.970 (-) PL 136.5. This is followed by a chat session on Zoom at 8:00PM. Members will have the Zoom code, but we don't publish it openly to prevent unwanted interruptions.

HEATHKITS

For those who remember the Heathkit era, there's an interesting article entitled "*Life After Heathkits*" published in *Analog Science Fiction And Fact*, July 1993. The article was submitted to your Editor by member Gordon Levine WB6JVP, but as it's covered by copyright I've chosen not to re-publish. If you'd like to read the article and can't find it with a Google search I'll send you a PDF copy upon request. Also, although the article speaks of no further production of Heathkits, Larry McDavid indicated that the company name has been acquired by another group. It's still a valid name. Check them out at Heathkit.com. The company is now located in St Joseph, MI.

MEMBERSHIP RENEWAL / APPLICATION

Fullerton Radio Club
PO Box 545, Fullerton, CA 92836

(Please Print)

Name #1	_____	Call: _____	Class: _____
Name #2	_____	Call: _____	Class: _____
Address:	_____	City: _____	State/Zip: _____
Phone #1:	_____	Email #1: _____	
ARRL Member	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Dues are \$20 per member, or \$25 per family. Students (full time) \$10

Bring your application and dues payment to the next meeting or mail to the above address.