President’s Column - September 2018

Like many of you, my interest in all things radio has been encouraged, supplemented, and informed by magazines aimed at the radio and electronics hobbyist. Over the years, I have had subscriptions to Popular Electronics, the Radio-TV Experimenter, Stereo Review, QST, Monitoring Times, 73, CQ, CQ VHF, Popular Communications, and likely some others that don’t come to mind as I’m writing this. With a couple of notable exceptions, they are all gone now.

Last year, I was pleased to discover a new (to me) publication that I would like to bring to your attention. It’s called The Spectrum Monitor and it covers a wide array of topics that relate to the radio hobby.

In 2013, Bob Grove, publisher of Monitoring Times, decided to retire and cease publication of the magazine that he started back in 1982. While the magazine went away, many of the contributing editors, led by Ken Reitz, KS4ZR, former managing editor of Monitoring Times, started a new Magazine, The Spectrum Monitor.

The Spectrum Monitor is a high quality color monthly magazine delivered by email in pdf form that covers a wide array of radio-related items, including ham radio, short wave listening, aircraft, military, and public service communications as well as having articles about all sorts of hardware, from ham gear to vintage restoration projects to software defined radio.

Subscriptions are $24/year and individual issues are available for $3. The only unusual thing about the subscriptions, is that they run from January to December. This means if you subscribed today, you would be emailed a link to the January through September issues and then receive a link each month for the remainder of the year. This might lead you to wait until January to subscribe, but I started mid-year and enjoyed “binge-reading” the first few months. Most of the articles are not particularly time sensitive anyhow.

You can visit their website at www.thespectrummonitor.com.

On a related magazine note, check out americanradiohistory.com for a huge selection of PDFs of out of print magazines and journals that relate to radio, TV, and electronics.

I’ll miss this month’s Fullerton Radio Club meeting, but I’ll see you next month.

73, Bob

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September MEETING

Wednesday, September 19, 2018

Chapman Activity Center
2515 San Carlos Drive, Fullerton
(Second street east of State College Boulevard off Commonwealth)

Meeting time – 7:00 PM

Visitors are always welcome

Dinner before the Meeting:
Black Bear Diner
5:00 PM
September Meeting Presentation

Walter Clark will be giving a talk on polarization. This includes his famous Spinning Field Strength Meter which reveals visually, the orientation of the E-field.

Also discussed: circular polarization, ground wave vs sky-wave. There will be a demonstration of an inside-out wave guide (G-line). Also discussed are various confined wave polarizations.

Weirdest of all, will be a demonstration of “unconfined” radial polarization. Useless, but really really interesting.

Confined Wave Polarization

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**September Board Meeting**

The September 2018 FRC Board Meeting was called to order at 7:30pm by Paul Broden.

Others present: Treasurer Gene Thorpe KB6CMO; Secretary Linda Endsley KJ6IHB. Directors; Paul Broden K6MHD; Larry McDavid W6FUB; Richard Belansky KG6UDD; Robert Gimbel KG6WTQ; Walter Clark. Member: Cheryl Thorpe KE6TZU

August minutes were approved.

Treasurer’s report: Checking $4,158262.62, Savings $2,607.62

Old Business:

The Christmas dinner will be on December 14 at Marie Callender’s.

New Business:

No memberships were received.

Bi-laws/responsibilities for Secretary/Treasurer/Vice President were discussed.

Need officers for next year.

Next board meeting: 3 OCT 2018

Adjoined at 8:30 pm

Submitted by Linda Endsley KJ6IHB
SoCal Direction Finders Win Medals in Korea

A team of eleven on-foot transmitter hunters is just back from the 19th World Championships of Amateur Radio Direction Finding in Korea with ten medals, more than from any other World Championships. USA was one of thirty countries competing over four days at Sokcho, which is near the demilitarized zone. Over 300 radio-orienteers took to the courses in four events during the week of September 2 through 7.

USA’s ARDF enthusiasts won their team positions at our national ARDF Championships in Truckee, California last June. FRC members Bob Houghton AD6QF and Tom Gaccione WB2LRH were volunteers at those championships.

Among the Team USA members in Korea was Bill Wright WB6CMD of Winchester, California (in the photo). He had practiced for the championships at FRC’s Antennas In The Park session at Hillcrest Park back in May. Bill was one of the three Team USA members in M50 category (men ages 50 through 59) that finished third out of thirteen nations in the two-meter classic competition on September 5. Two days later, these M50s got another set of bronze medals in the 80-meter classic competition. Team standings are determined by the aggregate scores of the individual team members. They are not allowed to assist one another on the courses.

During the weekend of August 10 - 12, there was a training campout at Mt. Pinos in the Los Padres National Forest. In addition to Bill Wright, our team members practicing that weekend included Joe Burkhead of Parker, Colorado, Bob Cooley KF6VSE of Pleasanton, California and Eduard Nasybulin of El Cerrito, California. Joe Burkhead was one of two team members in M40 category that scored third out of twelve countries in the 80-meter classic competition in Korea.

You can read about the rest of the team members and how they performed at www.homingin.com.

Joe Moell K0OV
ARRL ARDF Coordinator

Officer Nominations

WOW! It’s approaching the end of 2018, and as October approaches we note that nominations for Club officers will be due. The nominating committee will be looking for candidates for all club offices plus at-large Board members. YOU may be tapped as a potential candidate. Consider the opportunity seriously. This is your club and it will only run successfully with officers who take interest and are willing to take an office. Voting will take place at the November club meeting.
Opening discussion was on a technical feature of the two dams in Fullerton. Tom Fiske was present for the first part of the meeting but didn’t have a project to report on. He had to leave early to a church just a hundred yards away. It’s not his church home but his tenor voice was required at an important rehearsal.

**Larry McDavid** had three things to share. One was an antique VOM of German design and manufacture. He estimates very early 20th Century. There was a meter on it, but it had a slider for what is probably a Wheatstone bridge. Wheatstone bridges were used to get much more accurate measurements of resistance than even present day VOM circuitry.

Larry also brought two recently purchased adapters that you wouldn’t at first think would exist let alone be needed. One connects an old piece of equipment (RS-232) to the USB-2 connector of a modern computer. Both ends are serial but there is an FTDI chip in the grip of the RS-232 end. The other connector he bought goes between a cell phone and a HDMI projector. Larry often has pictures to share and instead of passing around the cell phone he can show everyone at once using his projector.

There was a discussion also during Larry’s report about finding your car in a parking lot. The bottom line on that discussion was that the Apple I-phone beats the pants off of any app on Samsung. As a part of what comes with the Apple is the ability to notice you just stopped your car. It remembers the location so that if you need to find it later, it is ready to tell you. According to Larry, all the Samsung apps required you to plan ahead before you leave your car that you will need it.

**Bill Webb** has built several more projects with his 3D printer. He passed around his latest works of art. He described how the CAD program he’s using now, TinkerCad, works to make simple things like enclosures. It is amazingly simple. He showed also the limitations and why it is good to learn more sophisticated CAD programs like Fusion 360 from Autodesk. He’s holding one of many projects that holds an ESP-32 or the more advanced version of that. It measures temp humidity and displays those along with other weather information from the weather underground. To do that it connects by way of WiFi to his cell phone which then connects to the internet.

It was about now that a thread of discussion went off to Apple’s introduction of three new products including an I-phone that is over a thousand dollars. Bill said their new watch senses your heart rhythm and calls 911 if it is tachycardia or if you fall and instantly go motionless.

About now Walter flew in with his tiny drone. It was all of $40. He then discussed the kind of sensors involves at the various prices. They all have rate gyros in all three axes but above about a hundred dollars there are also linear accelerometers in all three axis. These are integrated to do what has been done in missiles for years. But instead of going to a certain place the computer moves the vehicle in such a way that the value on the integrating capacitors get back to zero. That puts the vehicle where it took off. This most simple use of inertial navigation is what the users refer to as going home which is very handy when you can no longer see the vehicle. While its flying it uses the value on all three capacitors to
estimate how far away from home it is. In which case it makes a bee-line for home if that distance approaches what is left in the battery.

**Dick Bremer** brought a rather large auto-tuner for a variety of antenna sizes. The relays look pretty large so it was for some beefy transmitter. He got it at an equipment give-away at the local microwave ham club. (Corona, actually). He brought it for Dick Palmer to play with. It says Motorola on the weather proof box but the circuit serial number revealed that it was of Micom origin.

Dick Palmer was at the same meeting that Dick Bremer was at and his play-pretty was a function generator circuit built in 1971. It was pure nostalgia for him because when he was a young man 1971 he had in mind maybe to build it but never got around to it. But he saved that issue of Pop Tronics and now with a whole lot more experience with repair, was able to restore it. Perhaps in the interval (2018 – 1971 = 47 years ago) three capacitors needed replacing. And of course he got it to work. Someone asked if he really needed it. And he said, he really needed to get it working again. Is there any better need? He spent some time explaining its functions. Apparently it is a little more than just a function generator because it had synchronizing pulses for use as a television test signal generator.

Dick Bremer also brought for Dick Palmer’s pleasure a Cushman CE24 “Frequency Selective Level Meter.” It is like an S-meter for all frequencies from DC to 3 MHz. Dick was able to get it working and showed the level in dBm of the KFI signal arriving at Walter G5RV antenna. Assuming the antenna was 600 ohms the meter reading could be converted into microvolts. Dick also brought a really cool looking loop antenna someone gave him. It must have a broken lead because it didn’t work at all.

**Walter Clark** brought out his latest R/C project, a piggy-back plane. The twin has a lot of motor and battery and not enough wing so take off is a problem. It has more than enough power to take off vertically but it is Walter’s experience that it needs three axis gyro and found that part of the project rough going.
The discussion after Walter’s report led to a discussion about the shutting down of WWV and WWVH. Larry pointed out how many people need WWV-B. It is conceivable that the older stations could go away in view of the popularity of GPS based frequency standards. Larry also told us about the great improvement that the Bureau of Standards made in the Binary Phase Shift Keying modulation used on WWV-B and how pleased he is with La Crosse clocks. The keyword is “UltrAtomic.”

October BOARD MEETING

Open to all Club members
Marie Callender’s Restaurant
126 Yorba Linda Blvd., Placentia
First Wednesday of each month.

Next Board Meeting
October 3, 2018

QSO and dinner; 6:30 PM
Meeting: 7:30 PM