RF

ORANGE COUNTY AMATEUR RADIO CLUB, INC.

VOL. LXII NO. 10 P.O. BOX 3454, TUSTIN, CA 92781 October 2021

The Prez Sez...

By Nicholas AF6CF

In October, as we wait for the final Field Day numbers for our group from the ARRL, we will replace the annual auction cancelled because of the current health situation by a presentation about HF wire antennas. The plan is to postpone the auction until February next year. We are very fortunate in that we have several celebrities and outstanding HAM Radio operators in our membership, so this month's speaker again will be one of our own. He will take the mystery out of a particular type of antenna, so I highly recommend his presentation. Do not miss this presentation.

The TRW Swap Meet was a great success, and we were able to sell most of the equipment that was donated from the SK members and friends. We are offering some items at QTH.com and our website's "For Sale" items.

Please support the Club if you need to purchase any radio related

Next month we will have our Club Officers elections, so I encourage all of you to consider your participation. So, the November general meeting is also our elections night, and all the Board of Directors positions are up for grabs. Our Club has a term limits policy that precludes any individual to stay more than two years in any given position in the Board, so this is your chance to help the Club by becoming a Director, or even President. If you feel that you can fill a seat on the Board, please contact the Elections Committee (composed by AF6CF, N6GP and W6WG) or any Board member to get into the candidate's list. This is your chance to help the Club by taking part in the day-to-day decision making.

Speaking of calendars, December 10th will be our Christmas Party at Mimi's Café on 17th Street in Tustin. We expect the dinner price to be the same or lower than last year, and next month you will even be able to use PayPal in our website to pay for the dinner cost.

As usual, I hope to see you all at the next General Meeting

73 DE AF6CF

NEXT MEETING

October 15th, 2021

Join us Via ZOOM at 7:00PM! Current OCARC members will receive an EMAIL with instructions. Early check-in available at 6:30 PM(+-)

Ken Konechy W6HHC

on

"Understanding End-Fed Half-Wave Antenna..."

SPECIAL NOTICE:

During the COVID-19 pandemic ALL OCARC Nets will Remain Active!

See page 2.

In This Issue

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Monthly Events:

Membership Meetings* zoom
Time: 7:00 PM
When: 3rd Friday of each Month
***See ZOOM announcement pg.1**

Board Meetings
First Saturday**each month 8 AM
New physical location coming soon
** **Board will handle Club business by ZOOM at this time**

Club Nets (Listen for W6ZE):

10M: 28.375 ± MHz SSB
Wed- 7:30 PM - 8:30 PM
Net Control: Corey, KE6YHX

2M: 146.55 MHz Simplex FM
Wed- 8:30 PM - 9:00 PM
Net Control: Corey, KE6YHX

75M 3.883 MHz LSB
Tue @ 8:00 PM
Net Control: Corey, KE6YHX

CATALINA AMATEUR REPEATER ASSOCIATION (CARA)
147.090 MHz (+0.600 MHz) No PL
Monday - Friday
9:00AM and 9:00PM
Prg. Director. Tom W6ETC
NCO's include: Jeff: KK6TRC;
Don W6ZZW, Chris KF6LEX
John AJ6F; Milt N6MG;
Doug AD4AL; John KB6OVO

OCARC 2021 DUES

Membership period is:
1 January to 31 December

Individual New or Renewal:	$30.
Family New or Renewal:	$45.
Teen New or Renewal:	$15.

New Member Dues are *prorated quarterly* and **includes a badge**:
Additional Badges:[1] $ 3.
Use one of our interactive online forms to calculate current prices, join the club and/or order badges:

Online Forms / Dues & Badges

[1] $3. plus mailing costs if applicable
Dues are subject to change without notice

Member Tips from Loren Kellogg, KE7RXD

Club Member Loren Kellogg, KE7RXD submitted these tips with the hope that they would be a useful starting out point for how to think about some issues in Amateur Radio. Loren also would enjoy hearing some reader feedback which he could incorporate into expanding the topics covered here.

Voltage, Current, & Voltage Drop

Voltage tells us how much energy resides in an electrical system. Voltage is measured as a ratio: JOULES (a unit of energy) PER COULOMB (a grouping of electric charge). The energy of voltage drives current, which is the flow of electric charge.

Voltage & Direct Current

The phrase “direct current” describes a flow of electric charge that changes in magnitude (intensity) but not in polarity (direction) over time. The electric charge flows in a single, constant direction. Remember: voltage drives the flow of electric charge.

Why this matters: direct current comes out of our batteries and our power supplies, and goes into our radio equipment.

In sources of direct current, voltage happens when two regions experience a net **imbalance of electric charge**. The voltage of direct current arises from electric fields.

Where does the voltage of direct current come from?

- Forces Between Opposite Charges: Negative electric charges and positive electric charges attract one another. To separate those charges, we must expend energy to overcome the force of attraction. The expended energy is called *electromotive force*, or EMF.
- Forces Between Like Charges: Negative electric charges by themselves and positive electric charges by themselves repel one another. To bring those charges together, we must expend energy to overcome the force by repulsion. The expended energy is on again EMF.

Voltage & Alternating Current

The phrase “alternating current” describes a flow of electric charge that changes in both magnitude (intensity) and polarity (direction) over time. Remember: voltage drives the flow of electric charge.

Why this matters: alternating current goes into our battery chargers and our power supplies from the mains, and comes out of our radios into our antenna systems. Because of the alternating current in our antenna systems, we must cope with things like reactance.

In sources of alternating current, voltage results from **electromagnetic induction**. The voltage of alternating current arises from magnetic fields.

Where does the voltage of alternating current come from? A conductor moves through a stationary magnetic field, or a magnetic field moves around a stationary conductor. Whenever a conductor and a magnetic field interact, a voltage, an *electromotive*

force (EMF), happens in the conductor. The EMF causes electric charge to move, or to flow.

Voltage Drop

Voltage drop describes a loss of energy: as electric charge moves through the elements of an electrical circuit, overall voltage (energy) in the circuit declines.

- Undesired voltage drops happen across inactive elements of the circuit: conductors, contacts, connectors, etc. Supplied energy is lost (dissipated, usually as heat).
- Desired voltage drops happen across active elements of the circuit: loads, etc. Supplied energy performs useful work

Mathematics & Electronics

Mathematics is like a documentary film:

- Mathematics summarizes ideas and events (phenomena), condensing them into symbols or pictures.
- The symbols or pictures proceed logically from a beginning through a middle to an end.

In electronics, mathematics helps to explain how real-world electromagnetic phenomena interact.

W6ZE NETS

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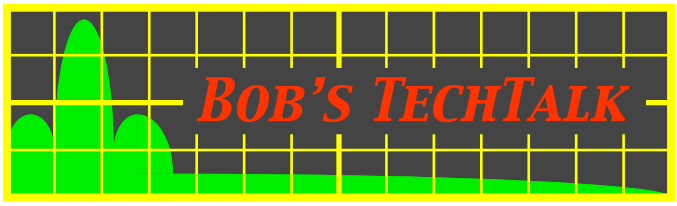
Net Control: Corey, KE6YHX

2M: 146.55 MHz Simplex FM
Wed - 8:30 PM - 9:30 PM
Net Control: Corey, KE6YHX

75M: 3.883 MHz LSB
Tuesday – 8:00 PM – 9PM
Net Control: Corey, KE6YHX



Bob's TechTalk #37
by Bob Eckweiler, AF6C

Beginner Talk

The Superheterodyne Receiver:

Wow, 'superheterodyne' is a big word. It is also the design that revolutionized receivers and is still the design of choice. What does this word mean and why is it so good? Today we'll explore those questions.

In the early days of radio the tuned radio frequency (TRF) receiver was common. Figure one shows the design. It consists of a number of tuned radio frequency amplifiers followed by a detector and an audio amplifier that can drive earphones or a speaker. Generally, these receivers tuned frequencies below one or two megahertz. Frequencies above that were considered unusable for broadcast. (The original ham band was all the undesirable frequencies below 200 meters – above 1.5 MHz).

Let's take a quick look at the RF amplifier. When properly designed it amplifies linearly; multiple signals on different RF frequencies are all amplified equally. In a TRF receiver this is undesirable because you will hear all the stations at once. Thus each RF amplifier is tuned using an LC circuit. This tuned circuit passes signals near its tuned frequency as shown in Figure two, and reduces signals away from the tuned frequency. The response of the filter depends on the 'Q' of the circuit. 'Q' is most influenced by the resistance of the coil.

This article originally appeared in the February 2007 issue of RF

The ability of a receiver to reject nearby signals is known as selectivity. In the TRF radio multiple tuned circuits are used for selectivity. As you change receiver frequency all these tuned circuits must tune together and track exactly – something that can be difficult to accomplish especially at higher 'Q's. Also, tuned circuits are effective relative to frequency. At higher frequencies two signals must be further apart to be attenuated the same amount for otherwise identical tuned circuits.

Let's briefly look at the other parts of the tuned receiver. The detector separates the intelligence (usually audio) from the RF signal. There are numerous types of detectors: diode detectors for AM; product detectors for SSB, DSB and CW; and discriminators or ratio detectors for FM. Detectors are a thesis on their own, so for now just remember it's a circuit that separates the modulation from the RF signal. Next is the audio amplifier. It just amplifies the audio so the intelligence may be heard through earphones or a speaker.

As TRF receivers are used for higher frequencies their selectivity becomes poorer and the tracking of all the tuned circuits becomes a nightmare, especially if band switching is involved (usually accomplished by changing plug-in coils.)

An advancement over the TRF is the regenerative receiver. It achieves high gain and selectivity by introducing positive feedback into an RF amplifier. It has a lot of desirable features. It uses less stages and parts than the TRF. It can operate effectively at much higher frequencies (into VHF). On the negative side, it is more difficult to tune, has poor stability and requires careful adjustment of the feedback. Still the regenerative receiver gained a lot of popularity and was used in

radios like the Heathkit "Lunchbox" and the National 1-10. Regenerative receivers are easy to homebrew. Still, they don't have the ease of tuning we have come to expect in our receivers today.

Let's look back at the tuned RF amplifier. At lower frequencies it provides reasonable selectivity but multiple tuned circuits are hard to track when tuning the radio. BUT, what if the receiver only tuned one frequency? Then you could use multiple stages with tuned transformers between them. The transformers only had to be tuned once and could be designed for higher 'Q'. Also since the frequency was fixed things like crystals with their very high 'Q' could be used as filters to improve selectivity tremendously. Alas though, you'd need a receiver for each frequency you wanted to listen to… or would you?

Let's go back to the RF amplifier again. Remember we said that a linear amplifier will amplify two signals equally. Well, if we design that amplifier with some built-in nonlinearity we get something a different response. In a non-linear RF amplifier the two signals interact so that at the output there are four signals, the two original signals plus a signal that is at the sum of the two signals and another signal that is at the difference of the two signals (Actually there are other weaker signals too that we won't discuss here but do play a part in good receiver design.) Thus if you have a signal at 1 MHz and another at 1.455 MHz you will have four signals at the output. The two original signals plus slightly weaker signals at 2.455 MHz (the sum) and 0.455 MHz (the difference). This phenomena is called heterodyning and the circuit is called a mixer.

Figure Three shows the design of a typical superheterodyne receiver. The desired signal is amplified by the RF amplifier and fed into the mixer. An oscillator operating at a frequency above or below the received frequency is ganged with the RF amplifier tuned circuit(s). As you tune the receiver the oscillator (called the local oscillator or LO) changes frequency so that it always remains a fixed frequency away from where the RF amplifier is tuned. This difference in frequency is called the Intermediate frequency (IF) and is the fixed frequency where most of the gain and selectivity is accomplished. The RF amplifier can now be designed to provide good signal to noise capability and good overload capability instead of gain and selectivity. The detectors and audio amplifiers operate similarly to the ones in the TRF receiver.

One problem with the superheterodyne receiver shown in Figure three happens at higher frequencies. Lets look at receiving a signal at 28.455 MHz. At the higher bands the local oscillator usually operates below the received frequency so it would be be at 28.000 MHz. If there is a signal at 27.545 MHz, the only thing keeping it from appearing at the IF frequency is the 'Q' of the RF amplifier's tuned circuit(s). If the signal is strong enough it will be heard. This unwanted signal is called an image. It can be reduced by raising the IF frequency or by using two IF frequencies, two mixers and two local oscillators. Since the two IFs are fixed, the second LO can be crystal controlled. This type receiver is called "double conversion" superheterodyne. The first IF is usually only one stage but is high enough in frequency to reject the undesired image. Figure four shows a typical double conversion receiver. Triple conversion receivers exist too.

Since superheterodyne receivers have oscillators in them, especially double and triple conversion receivers, a byproduct of these oscillators can appear as a signal in the receiver. This byproduct is called a "birdie". They al-

ways appear in a given receiver at the same frequency and receivers may have more than one. Designers choose frequencies within the receiver to minimize birdies or put them at frequencies where they do less harm.

A variation on the superheterodyne receiver seen in many ham receivers since the sixties (or even fifties for expensive receivers) is to have the first LO crystal controlled and the first IF have a wide bandpass of 200 KHz, 500 KHz or more. The second local oscillator is then tunable over one fixed range of 200 KHz, 500 KHz or more and the second IF is fixed. This feature removes the requirement that the tunable LO be switched to cover different frequencies on different bands and allows the tunable LO to be designed to operate very accurately. the Heathkit LMO and Collins PTO are examples of such oscillators. Heathkit's LMO tunes 500 KHz between 5.000 MHz and 5.500 MHz, and the Collins PTO (70K2 used in the 75S3) tunes 200 KHz between 2.955 and 3.155 MHz.

Today's receivers benefit from new technologies that were only dreams a few years ago. Phase-lock-loop oscillators provide tuning with crystal control stability and accuracy. Software designed radio handle signal processing in onboard firmware. New amplifier designs provide sensitivity and signal to noise ratio improvements along with high immunity to overload. Filters provide high selectivity. Roofing filters, usually located just after the first mixer, reduce overloading and distortion from being created in the high gain stages of the IF by reducing or eliminating off frequency signals before they are amplified.

Heterodyning is also found in SSB transmitters. Generating an SSB signal at a fixed frequency allows easy design and the use of a crystal or mechanical filter to eliminate the unwanted sideband. The fixed SSB signal can then be heterodyned to the desired frequency and fed to a linear power amplifier for transmitting.

73, from AF6C

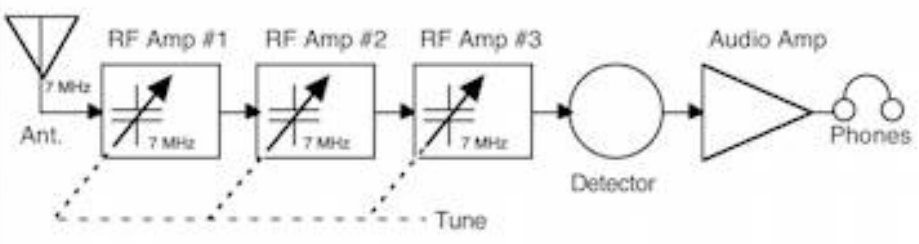


Figure 1 – TRF Receiver

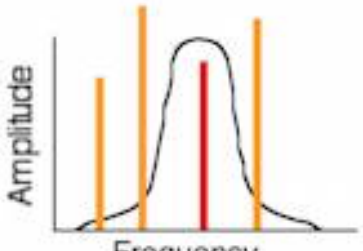


Figure 2 –Typical LC Response

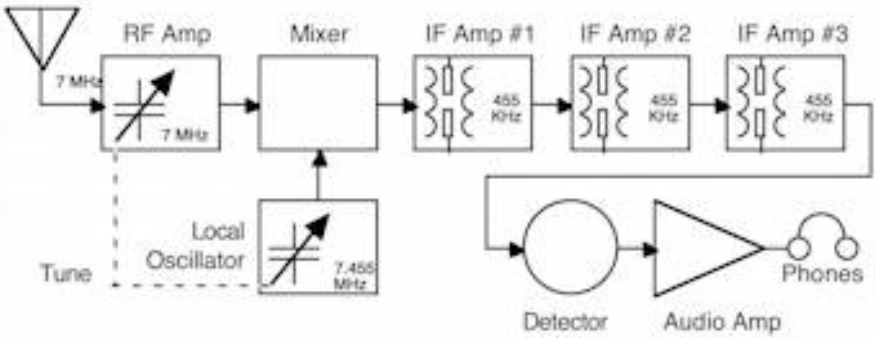


Figure 3 – Superheterodyne Receiver

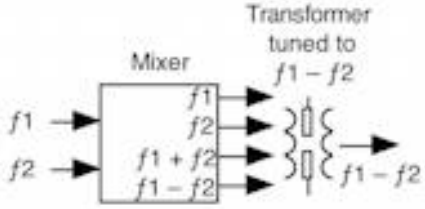
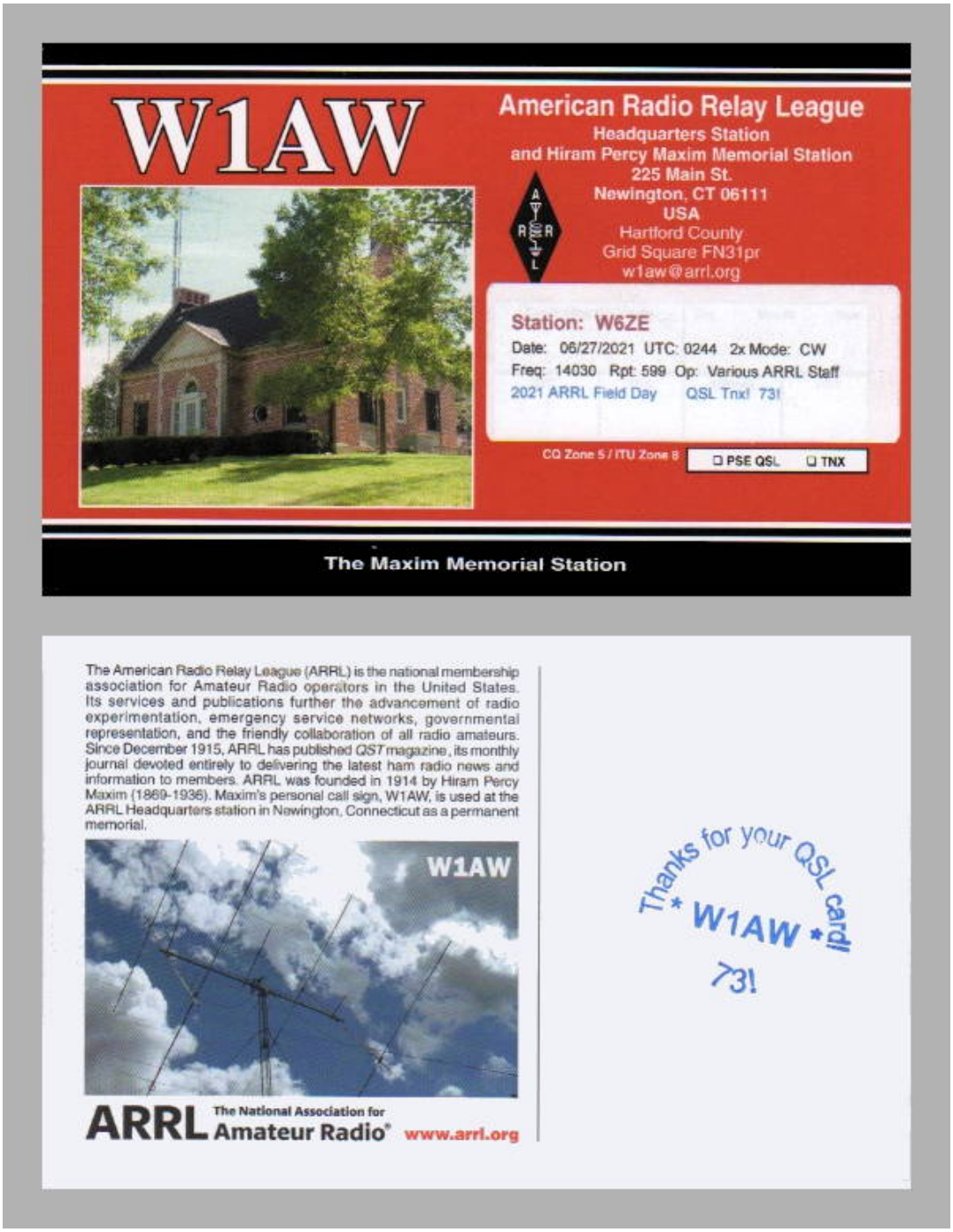


Figure 4 – The Mixer



CONTACT WITH THE MOTHER SHIP

The OCARC often works W1AW during Field Day. While we're confirmed numerous times in LOTW, we don't have their QSL in our files. So this year one of our new W6ZE QSLs (along with an SASE) was sent. Last week their QSL arrived. For those unfamiliar with the call, W1AW is the call of the ARRL amateur radio station in Hartford, CT, with its iconic station building. If you ever find yourself near Hartford, it is worth the visit.

de AF6C

OCARC GENERAL MEETING MINUTES 2021-09-17

Due to the ongoing pandemic, the ninth General Meeting of the year was via Zoom on Friday, September 17, 2021. The meeting was called to order by our president Nicholas Haban AF6CF at 7:00 PM PDT. There were twenty-nine (29) members, guests and visitors present, including our speakers.

•Pledge of Allegiance
Nicholas starts a video to lead the Pledge of Allegiance.

•Introductions
Bob AF6C welcomes a new member, Paul Herrick N6HXF.

•Meeting Presentation
Nicholas AF6CF turns the meeting over to our vice president, Tim Goeppinger N6GP. Tim welcomes a prestigious visitor, Gordon West WB6NOA, and introduces our first speaker, John Miller K6MM. Mr. Miller is representing the Northern California Contest Club and is a member of NCDXF. He is also well known for his DXpeditions. Mr. Miller presents "The California QSO Party."

Figs 1 and 2 – John Miller K6MM: "California QSO Party"

John explains the point system, operating times, and the location qualifications of the event. The CQP has an in-depth web site, with registration, log submission, and many and varied tools.
Questions for John can be directed to k6mm@arrl.net .

Tim G. N6GP introduces our next speaker, Janet Margelli KL7MF. Mrs. Margelli has been Manager of the Anaheim Ham Radio Outlet for decades, has had an interesting career, traveling to Yaesu in Japan, and is an excellent operator, handling the pile-ups on Field Day and other operating events. HRO is celebrating its 50th Anniversary, and has given away a new car, and another soon to celebrate. Mrs. Margelli presents "The History of Ham Radio Outlet."

Ham Radio Outlet started for the love of Ham Radio, and it has flourished. Janet takes us through the winding path of the perils and successes of the renowned business.

Fig 3 – Janet Margelli KL7MF with Chip Margelli K7JA on the side

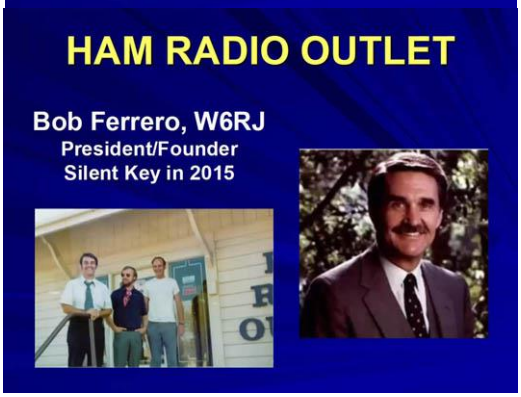


Fig 4 – "Ham Radio Outlet, The Candy Store Story"

Fig 5 – Bob Ferrero W6RJ President/Founder

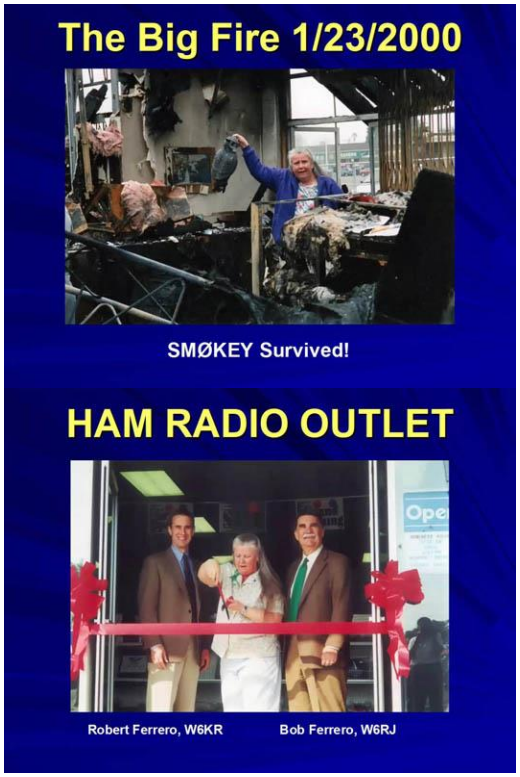
Fig 6 – Ham Radio Outlet in Burlingame, CA

Fig 7 – Jim Rafferty N6RJ, Vice President, HRO

Fig 8 – Chip K7JA and Janet KL7MF

Fig 9 – "12 Stores–2-Day Ground Shipping Everywhere!"

Fig 10 – HRO Customer Joe Walsh WB6ACU
Fig 11 – Special HRO Friend, Jay Leno



Figs 12 and 13 – The Fire: SMØKEY Survived! and The Reopening

Fig 14 – HRO 50th Anniversary – Thank You!

Tim G. N6GP conveys our appreciation for the fascinating presentation, and turns the meeting over to the attendees for questions.

Carl KN6LDW remembers driving past the Anaheim HRO for years, and saw the fire in 2000. He is grateful for Janet putting the store back up and for their help and being there for us. Janet tells of the fortunate situation with the antennas on the roof during and after the four-alarm fire.

Tim G. draws a parallel to the well-managed California family-owned business, In-N-Out Burger, and thanks Janet again for getting the store started again.

Tim G. turns it back to our president, Nicholas AF6CF.

Nicholas highly recommends viewing the Jay Leno video with Chip Margelli K7JA on our web site.

Business Meeting

Our president, Nicholas AF6CF, thanks Janet for the presentation as well, and starts the business meeting at 7:57 PM PDT. All ten (10) Board members were present for a quorum. Nine (9) topics were brought to the Board tonight, and one (1) motion carried, adjournment.

•Director Reports

-President: Nicholas AF6CF reports he is making an electrical box for the new generator.

-Secretary: Corey KE6YHX reports he got the mail at the Tustin Post Office today. One item was an article for RF, and the other two were junk mail.

Paul W6GMU breaks to announce an earthquake at 8:01 PM PDT.

•Questions and Answers

-Treasurer: Ken W6HHC directs us to the September *RF Newsletter* for the Cash Flow Report. We have an increase in inflows, and have been keeping expenses low, with our cash assets totaling about $7,600.

-Technical: Steve N1BKB has an item of interest. We have a Kenwood TS-430S. It has some problems and Steve plans to take it for repair, and put it up for sale.

-Membership: Bob AF6C reports we have 120 members. Bob made some new badges and will take them to the post office tomorrow.

•Board Member Nominations:
Nicholas AF6CF calls for nominations to the Board. None reply.

Show and Tell:
Don Mech N6XBP has a new radio test device to diagnose his Yaesu FT-1000D. It is a Rohde & Schwarz full spectrum analyzer and signal generator, among other things. He bought it for about $1,200, and it can receive and transmit double-sideband. It is in perfect condition, but the user manual is quite voluminous.

Chip K7JA points out the importance of the drive-control on the FT-1000D.

•Good of the Club
Bob recently acquired a Drake 2-NT CW transmitter to offer to the members.

Tom has some electronic parts from a closing mobile radar business filling the back of his truck for the TRW Swap Meet.

•Opportunity Drawing
Nicholas AF6CF introduces the opportunity drawing, and the prize of a transistor learning kit. Ron W6WG spins the wheel and the prizewinner is Frank Mendoza KM6ZSP, Santa Ana.

•Adjournment
A motion to adjourn was made, seconded and carried at 8:27 PM PDT.

--Respectfully submitted by Corey KE6YHX
OCARC Secretary

OCARC BOARD MEETING MINUTES 2021-10-025

Due to the ongoing pandemic, the tenth Board Meeting of the year was via Zoom on Saturday, October 2, 2021. The meeting was called to order by our president, Nicholas AF6CF at 8:18 AM PDT. Seven (7) directors were present for a quorum. Our activities chairman, Ron W6WG, left early for the California QSO Party; our public relations officer, Tom W6ETC, came in at 8:26 AM PDT; our vice-president, Tim G. N6GP, and our treasurer, Ken W6HHC, were absent. There were eighteen (18) topics brought to the Board this morning, and two (2) motions carried, including adjournment.

Fig 1 – Seven (7) Board Directors were present.

•Director Reports
-Secretary: Corey KE6YHX reports he will check our post office box later today. (There was only one piece of mail, a donation

request.)

-Treasurer: Ken W6HHC prepared a cash flow report for the year-to-date for the Board. YTD inflows total $5,723, including an increase in the "sale of equipment" to $1,585, and an increase in the "2021 SK Special Disposal Effort" to $1,311, mainly from the Club's efforts in the sales at the TRW Swap Meet. Outflows total $2,019, for a net gain of $3,704.

-Technical: Steve N1BKB reports the Kenwood TS-520 from the SK donation is in poor shape. Two other items, the frequency counter is out of calibration, and the radio phone-patch remains to be sold.

-Membership: Bob AF6C reports we have 120 members

•Old Business

•Newsletter Editors:

October: ..... Tim M. N6TMT
November: ..... Corey KE6YHX
December: ..... Tom W6ETC
January: .....--open to volunteers--

•General Meeting Programs:

October: Ken Konechy W6HHC presents: "End-Fed Half-Wave Antennas"
November: .. --to be announced--
..... Plus: Club Elections
December: ..... Christmas Dinner

•Hybrid Meetings:

The American Red Cross cannot host any meetings at their facilities until at least the end of the year.

•Club Web Site Status:

Bob has been working on the front-page images, but they are not ready yet.

•SK Donations from Tegel, Boykin WB6KJJ, and others:

Steve N1BKB will have the Kenwood TS-430 worked on, and should have it ready for sale later this year. Final-cleanup is coming soon, and this chapter will be closed. Nicholas AF6CF will have the final report at a future meeting.

•New Club Generator:

Nicholas AF6CF plans to have the propane valve and electrical finished later this month. The new generator should be ready for Winter Field Day in January.

•TRW Swap Meet Report:

Nicholas AF6CF has emailed the reports to the Board, and publicly acknowledges and thanks all the people who assisted with this.

•Old Generator Disposal:

Bob AF6C may be able to get to this project at the end of year.

•Christmas Party:

Ron W6WG has us reserved at Mimi's for December 10, at 6:00 PM PST. We have a minimum combined purchase of $350.

Nicholas AF6CF expects to have three very nice prizes for the opportunity drawing. Bob AF6C has another prize for the opportunity drawing. The recent revenues can be used for more prizes.

Tom W6ETC suggests tickets be purchased by the attendees for the opportunity drawing. Nicholas is against making profits from the party, but agrees to have purchased opportunity-drawing tickets.

Steve recommends making a budget with the new revenues for the coming year.
The Board discusses the Club finances.

Nicholas asks to table the budget and arrangements for the Christmas Party until the next meeting. Corey KE6YHX so moves, it is seconded, and is carried at 9:05 AM PDT.

•PayPal Account Ownership:
Dan KI6X gave our new trustee, Tim Goeppinger N6GP, the necessary information and we are ready to transfer.

•New Business
•New Activities for the Year:
Tom W6ETC continues Nicholas' AF6CF suggestion of a picnic, and Bob AF6C likes the idea. Tom is asked to put together a proposal for the Board. Tom asks for some assistance with arrangements.

•Election Committee:
Nicholas AF6CF, Tim G. N6GP, and Ron W6WG are election committee chairmen, and Nicholas calls for a show of hands of those willing to continue on the Board for next year. A few agree, and we will continue this discussion at the next meeting.

•Swap Meet Leftovers:
Tom W6ETC shows some oscilloscopes he was offered that didn't make it to the swap meet, and Corey KE6YHX is interested in one that is working. Bob AF6C says they are useful, but the "storage" oscilloscope is hard to maintain. Dan KI6X can pick them up. Corey cannot store all three for testing.

•Good of the Club
•Tom suggests putting together a lending library, including a Club antenna analyzer, and the Board discusses this at-length. The current member-loan situation is adequate for the time being.

•The Board decides to have more W6ZE business cards printed.

•Adjournment
A motion to adjourn is made, seconded, and carried at 9:39 AM PDT.

--Respectfully submitted by Corey KE6YHX,
OCARC Secretary

Ken, W6HHC working on a new antenna idea?

RadioActivity
October 2021

Upcoming Activities:

October

- ***10-10 Int. 10-10 Day Sprint:** 0001 UTC to 2359 UTC Sunday Oct. 10.
- **Oceania DX Contest, CW:** 0600 UTC Saturday Oct. 9 to 0600 UTC Sunday Oct 10.
- ***CQ World Wide DX SSB Contest:** 0000 UTC Saturday Oct. 30 to 2400 UTC Sunday Oct. 31.

November

- **ARRL Sweepstakes Contest, CW:** 2100 UTC Saturday Nov. 8 to 0300 UTC Monday Nov. 8.
- **10-10 Int. Fall Contest, Digital:** 0001 UTC Saturday Nov. 13 to 2359 UTC Sunday Nov. 14.
- **ARRL Sweepstakes Contest, SSB:** 2100 UTC Saturday Nov. 20 to 0259 UTC Monday Nov. 22.

***** Indicates club entries are accepted
** Indicates team entries are accepted
Note: When submitting logs for ARRL Contests indicate your club affiliation as "Orange County ARC"

State QSO Parties:

- **Nevada QSO Party:** 0300 UTC Saturday October 9 through 2100 UTC Sunday Oct. 10.
- **Arizona QSO Party:** 1500 UTC Saturday October 9 to 0500 UTC Sunday Oct. 10.
- **Pennsylvania QSO Party:** 1600 UTC Oct. 9 to 0400 UTC Sunday Oct. 10 and 1300 UTC to 2200 Sunday Oct. 10.
- **South Dakota QSO Party:** 1800 UTC Saturday Oct. 9 through 1800 UTC Sunday Oct 10.
- **New York QSO Party:** 1400 UTC Saturday Oct. 16 through 0200 UTC Sunday Oct. 17.
- **Illinois QSO Party:** 1700 UTC Sunday Oct. 17 through 0100 UTC Monday Oct. 18.

Repeating Activities:

- **Phone Fray:** Every Tuesday night at 0230 UTC to 0300 UTC.
- **CWops Mini-CWT:** Every Wednesday at 1300 to 1400 UTC, 1900-2000 UTD and Thursday 0300-0400 UTC
- **SKCC:** Weekend Sprintathon (Straight Key CW) on the first weekend of the month after the 6TH of the month. 1200 Sat. to 2359Z Sunday.
- **SKCC:** Sprint (Straight Key CW) 0000Z to 0200Z on the 4th Tuesday night (USA) of the month.
- **K1USN Slow Speed Test:** (CW, 20WPM Max.) Every Friday 2000 UTC to 2100 UTC Every Sunday night at 0000 UTC to 0100 UTC Monday

OCARC Club Nets:

- **75 Meter Net:** Every Tuesday night at 8:00 pm to 8:30 pm Local Time. SSB 3.883 MHz
- **10 Meter Net:** Every Wednesday night at 7:30 pm to 8:30 pm Local Time. SSB 28.375 MHz
- **2 Meter Net:** Every Wednesday night at 8:30 pm to 9:30 pm Local Time. FM Simplex 146.55 MHz

Other Nets:

- **Net-AT-9:** Wellness & Support Monday thru Friday 9:00 am and 9:00 pm Local Time 147.090 MHz (+600 MHz) No PL

Send an email to *Ron W6WG, w6wg@w6ze.org to have your favorite activity or your recent RadioActivity listed in next month's column.*

73, Ron W6WG

OCARC Cash Flow - Year to Date

1/1/2021 through 9/28/2021

Category	1/1/2021-9/28/2021
INFLOWS	
2021 SK Special Disposal Effort (Net)	1,311.00
Badge Income	1.64
Donation -new FD Generator	500.00
Dues, Family (PayPal)	129.50
Dues, Membership	487.50
Dues, Membership (PayPal)	1,651.27
Dues, Membership (Paypal) 2022	57.66
Sale Of Equipment	1,585.07
TOTAL INFLOWS	**5,723.64**
OUTFLOWS	
Field Day - Propane	45.20
Field Day Rental - Tent	200.00
Generator - new Firman	915.87
OCARC Historian	97.91
PayPal Fee	1.75
PO Box Rental	118.00
Storage of Equipment - Ann Millard	250.00
Web Site Hosting	171.00
Web Site SSL Fee	69.99
ZOOM subscription	149.90
TOTAL OUTFLOWS	**2,019.62**
OVERALL TOTAL	**3,704.02**

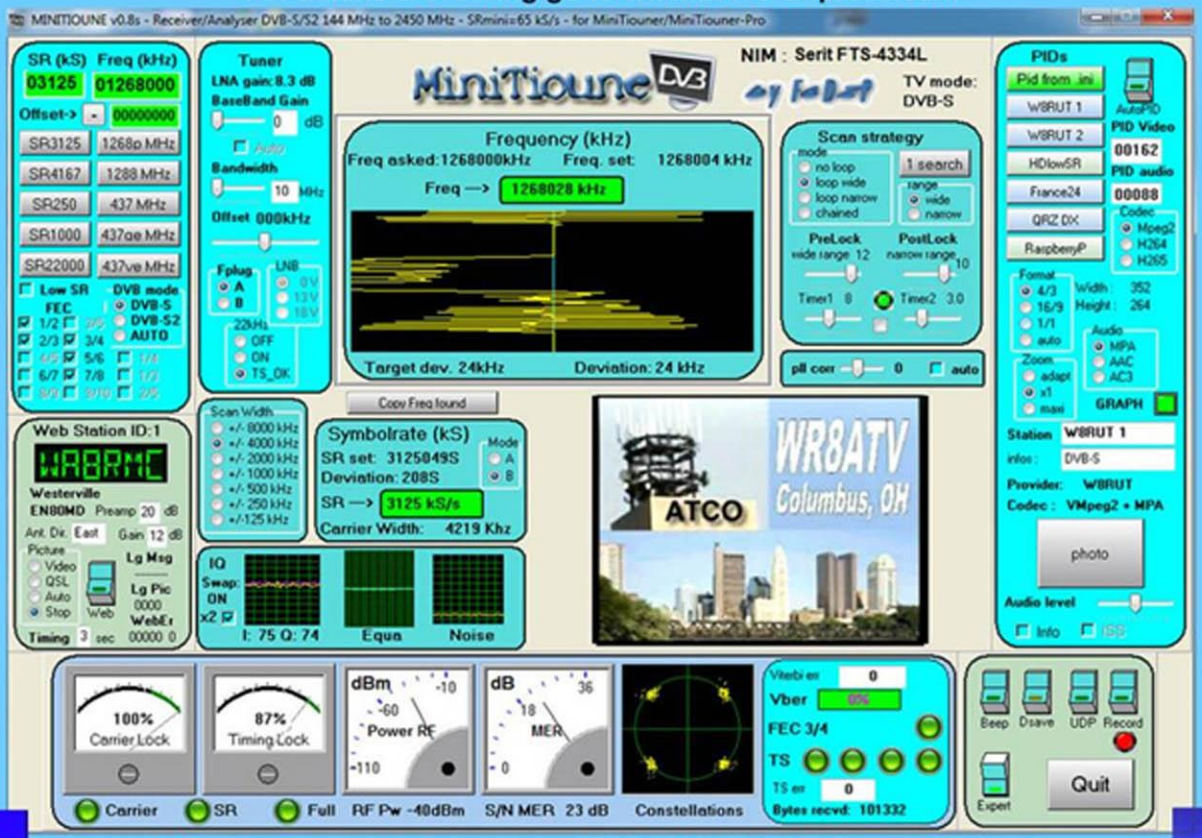
MiniTiouner-Express

Digital Amateur Television DVB-S/S2 Receiver / Analyzer

Available at DATV-Express.com

- Operates with Windows PC using free MiniTioune software from Jean-Pierre F6DZP
- Smaller than a stack of 2 decks of cards (picture above is full size)
- Two independent simultaneous RF inputs with internal preamps
- High sensitivity -100dBm @1288MHz – at 1/2 FEC
- Fully assembled/tested in aluminum enclosure
- Covers 144-2420MHz (ideal for Space Station DATV reception)
- Symbol rates from 75 KSymb/s to >20 MSymbols/sec
- Uses external 8-24VDC supply or +5V from USB-3 port (with small modification)
- Real time signal modulation constellation & dBm signal strength display
- Price: US $75 + shipping – order with PayPal

For details & ordering go to www.DATV-Express.com



(MiniTioune display above is the ATCO 1268MHz DVB-S repeater signal at WA8RMC QTH 15 miles away).