



A Fresno Amateur Radio Club Newsletter Jan., 2024 Volume 87, Issue 1



Dues! The Fresno ARC encourages all old and new members to fill out the form on the last page of any Skip and send with checks to the club P.O. Box. Remember to make checks out to "Fresno Amateur Radio Club, INC."

**FARC Next Event—
Meeting Jan. 12 ,
Fri. 7 P.M.**

FARC BOARD meets
the 1st Tuesday of the
month.

FARC Nets

Morning Drive Time
Net:

Weekday mornings-
7:30—8:00 a.m.
W6TO/R 146.940

FARC Net:

Sundays @ 7:00 pm
W6TO/R 146.940
Morning Net 7:30 A.M.

Web page:
W6to.com



Allen Ross Award for 2023 was presented at the December banquet to Aaron K6USY. Rob KM6SRR on left, Ken WA6OIB on right.

Remember to check into our FARC nets when you can, on the W6TO repeater (146.94-). Drive time net Monday through Friday at oh dark thirty, and the Sunday night net at 7 P.M.

Regular meetings resume in January (second Friday of the month).

Pictures from our 2023 December FARC dinner on page 3.

The Allen Ross award is given out each year at the December dinner meeting. More info on the selection process on page 8. Our 2023 personable recipient, Aaron K6USY is vice president and has been our web master for over a decade. Aaron's third harmonic is in the picture below.

Happy New Year from our board of directors:

Jim W6NIF - Greetings. With the New Year here, let's pray for peace in this world. That's all I think we want. If that can be done, then all good can be had.

John K6MI - Best wishes and HNY to all. 2024 will be a great year to enjoy our hobby. With the increase of sun spots this will be a great year for the higher HF bands, and meeting club members at meetings and on vhf is always a pleasure.

Aaron K6USY - Looking forward to what we can accomplish together in 2024; it is going to be a great year in Amateur Radio.



FARC– New Members! 2024 dues now due! Stay on the membership list!
Send your dues check to Fresno Amateur Radio Club, INC., PO Box 5912, Fresno 93755-5912
Board meeting on the first Tuesday of the month.

Fresno Amateur Radio Club



Ken WA6OIB presenting certificates of appreciation to many very deserving club members at the December banquet.

The table decorations and prizes were beautifully done by Gwynne WA6VZM, Patti Lion, Leslie, and Mary KN6PRZ, with special thanks to Jim W6NIF for getting the prizes.

FARC BOARD OF DIRECTORS

FARC Officers and Board members:

| | | | |
|-----------------------------|------------------------|----------------|---------|
| Ken Holden, WA6OIB Pres. | wa6oib@w6to.com | (559) 289-2891 | 12/2024 |
| Aaron Lusk K6USY V.P. | k6usy@w6to.com | (559) 905-4180 | 12/2023 |
| Marcus Beedle KG6QNY Treas. | kg6qny@w6to.com | (559) 360-7444 | 12/2024 |
| Jim Erbe, W6NIF Sec. | w6nif@w6to.com | (559) 903-2200 | 12/2024 |
| Larry Lion, W6OWL | larrylion2@outlook.com | (559) 227-5159 | 12/2024 |
| Dennis Holloway, KI6NVG | dki6nvg@hotmail.com | (559) 323-7386 | 12/2023 |
| Rob Egan, KM6SRR | egan@netptc.net | (559) 281-4730 | 12/2023 |

Web master Aaron Lusk, K6USY k6usy@w6to.com (559) 905-4180

Skip Editor John Morrice, K6MI k6mi@pacbell.net (559) 275-7373 (550) 906-7031 cell



You can download this and past Skip issues under the Document Archive menu by visiting w6to.com.

On the even years four directors are elected, and on odd years three directors are elected.

For sale adds on the next to last page of Skip!

Take advantage of the opportunity, send your adds to K6MI at pacbell.net

Jan. 12 Meeting 7 P.M.

Feb. 9 Meeting 7 P.M.

March 8 Meeting 7 P.M.

April 12 Meeting 7 P.M.

May 10 Meeting 7 P.M.

San Joaquin Valley Nets:

The California Traffic Net meets daily on 3.906 MHz and 6:00 PM local time.

The Golden Bear Amateur Radio Net meets nightly at 7:00 PM local time on 3.975 MHz.

Northern California Net (NCN), the Section Traffic Net, meets nightly on 3.533 MHz at 7 PM Pacific Time.

San Joaquin Net meets Monday-Saturday on 3918 khz, at 6 PM Pacific Time.

Western Public Service System (WPSS) meets nightly on 3952khz, roll—at 7:30 PM local Pacific Time.

The Mission Trail Net meets nightly on 3.857.5 MHz at 8:00 PM local time.

Northern California Net 2 (NCN2) The slow speed training session of NCN, meets nightly on 3.533 MHz at 9 PM Pacific Time. Handling traffic on CW is a good way to improve your CW skills.

Sunday Night FARC 2m net 7 P.M. 146.94 Mc.

Sunday and Wed. Night 2m Bozo Net, 7:30 P.M. 144.24 Mc. USB

Monday 220 Mc. 7:30 P.M. USB 222.1 Mc followed by check ins on 50.140 Mc. USB

Tuesday 7:30 P.M. USB 1296.1 Mc.

Thursday 7:30 P.M. 432.1 SSB net

Wednesday 7 P.M. 10M cw net, 28.140

Wednesday 8 P.M. 10M ssb net 28.445

Every Wednesday night is an enjoyable time for all ham operators. At 7PM local time, there is a CW net on 28.140 MHz-the NCS is Guss, KF6ZXO- welcomes all hams regardless of CW speed. Then around 8 PM local, there is the USB net on 28.445 MHz.

The *Noontime Net* is a public service Amateur Radio *Net* that meets everyday on 7284 kHz. and 3970 kHz. with an alternate frequency of 7265 kHz for both nets.

QCWA net on 146.85 pl 141.3 7 P.M. on Monday. Meeting on the fourth Tuesday of the month.

Backup FARC repeater if 146.94 is down—

146.61 pl 141.3

Fresno Amateur Radio Club

Local Amateur Radio Repeaters

| <i>Organization</i> | <i>Call Sign</i> | <i>Frequency</i> | <i>Offset</i> | <i>PL</i> |
|---------------------|------------------|-------------------|---------------|-----------|
| CARP | K6ARP | 146.865 | - | 141.3 |
| CARP | N6JXL | 224.380 | - | 141.3 |
| CARP | K6ARP | 444.725 | + | 141.3 |
| CARP | NI6M | 440.350 | + | 141.3 |
| CONDOR | WB6BRU | 224.900 | - | 156.7 |
| FARC | W6TO | 146.940 | - | 141.3 |
| FARC backup | WA6OIB | 146.61 | - | 141.3 |
| FARC | W6TO | 223.940 | - | 141.3 |
| FARC | W6TO | 444.200 | + | 141.3 |
| BRA | W6FSC | 145.230 | - | 141.3 |
| BRA | W6FSC | 443.450 | + | 141.3 |
| KINGS ARC | N6CVC | 145.110/444.95 | - | 100.0 |
| NC9RS | NC9RS | 927.6625/902.0125 | - | 146.2 |
| MADERA ARC | W6WGZ | 147.180 | + | 146.2 |
| MADERA ARC | W6WGZ | 441.175 | + | 146.2 |
| QCWA | WQ6CWA | 146.850 | - | 141.3 |
| QCWA | WQ6CWA | 443.250 | + | 107.2 |
| RACES | KJ6OUG | 147.150 | + | 141.3 |
| KE6JZ | KE6JZ | 146.820 | - | 141.3 |
| TURLOCK ARC | W6BXN | 147.030 | + | 100.0 |
| Fresno Low | K6WGJ | 145.43 | + | 141.3 |
| Meadow | N6VRC | 147.165 | + | 141.3 |
| Meadow | N6VRC | 440.025 | + | 141.3 |
| Santa Rita | N6VRC | 147.285 | + | 141.3 |
| Santa Rita | N6VRC | 442.275 | + | 141.3 |
| Visalia | N6VRC | 442.525 | + | 141.3 |
| Porterville | N6VRC | 443.825 | + | 141.3 |
| Fresno Low | K6WGJ | 444.975 | + | 141.3 |
| Bear Mt. | N6VRC | 443.950 | + | 141.3 |
| Mt. Bullion | N6VRC | 442.350 | + | 141.3 |
| Bear | N6VRC | 927.05 | + | 141.3 |
| WA6IPZ | WA6IPZ | 52.84 | - | 82.5 |
| Tulare CARC | WA6BAI | 146.88 | - | 103.5 |

Birthdays

01/22 Aram KD6STR
01/27 Stephen AG6JI
01/29 Joe KN6QLE

Ten meter net, CW and Phone, every Wednesday
7 P.M. for CW at 28.140

8 P.M. for SSB at 28.445

This is a local net, the cw part run by KF6ZXO, and the SSB with various net control ops.. Have fun checking in on one or both modes.

The monthly attendance prize!

Next drawing will be \$40 at the Jan. meeting.

Anniversaries

01/04 Chris KD6HTV
01/07 Candace & Rob KM6SRR
01/18 Paula & Bob K1RLP
01/19 Joan & Perry K6XJ
01/25 Glenita KB6OJN & Jack WY6B
01/31 Gloria & Mikael KM6MRT





QSCW Quarter Century Wireless Association
Next meeting Jan. 23, 2024 at noon
at Jeb's Blueberry Hill Café
3951 N. Blackstone Ave., Fresno, CA 93726

QCWA meetings on Monday nights at 7 P.M. on the QCWA repeater, 146.85, pl 141.3

FRESNO, CALIFORNIA U. S. A.

TNX
B 950

KN6KAQ

RADIO WN7YHJ CONFIRMING QSO OF 6-29 1955
AT 9:45 AM PM ST UR 17 MC. CW SIGS RST 579
XMTR: 5095 W. INF. RCVR: 5-38
PSE QSL TX JACK DAVIS Jack
5095 LAUREL
ur mfg w/ Aug -

PHOENIX, ARIZONA U. S. A.

W7YHJ

RADIO _____ CONFIRMING QSO OF _____ 195____
AT _____ AM _____ PM _____ ST UR _____ MC. CW SIGS RST _____
XMTR: _____ W. INP. RCVR: _____
PSE QSL TNX. 73 BENNETT P. HAMAN, JR.
3106 W. BETHANY HOME RD.

Ben WB6GBS, our weekday morning net control has a QSL from 1955, when his call was W7YHJ and his QTH was Phoenix, Arizona.

Antenna Resonance Duane KI6QEL

Antenna resonance is a crucial concept in the field of amateur radio and radio frequency (RF) communication. Resonance occurs when the electrical length of an antenna is such that it matches the wavelength of the radio frequency it is designed to transmit or receive. When an antenna is resonant, it efficiently converts electrical energy into radio waves and vice versa.

Here are some key points to understand about antenna resonance:

Wavelength and Frequency:

Wavelength and frequency are inversely proportional in the electromagnetic spectrum. Higher frequencies have shorter wavelengths, and lower frequencies have longer wavelengths. The formula relating wavelength (λ) and frequency (f) is: $\lambda = c/f$, where c is the speed of light.

Resonant Length:

The physical length of an antenna is critical in achieving resonance. Different types of antennas have specific lengths that correspond to certain wavelengths or frequencies.

Resonance occurs when the electrical length of the antenna matches the wavelength of the transmitted or received signal.

Impedance Matching:

Resonance also involves impedance matching. Impedance is a measure of opposition to the flow of alternating current in a circuit. When the impedance of the antenna matches the impedance of the transmission line and the connected equipment, energy transfer is most efficient.

Efficiency and Radiation Pattern:

A resonant antenna is more efficient in radiating or receiving signals at its tuned frequency. The radiation pattern of a resonant antenna is typically more predictable and desirable compared to a non-resonant antenna.

Tuning and Adjustment:

Antennas can be designed to be resonant at a specific frequency, or they can be tunable to cover a range of frequencies. Adjustment methods include physically changing the length of the antenna or using tunable elements to match the antenna to the desired frequency.

Standing Waves:

When an antenna is not resonant, standing waves may occur along the transmission line. Standing waves can lead to power loss and mismatch issues. Resonant antennas minimize standing wave issues, leading to better transmission efficiency.

In summary, antenna resonance is the state where the electrical characteristics of the antenna, such as length and impedance, are matched to the frequency of the transmitted or received signal. Achieving resonance is crucial for optimizing the performance of an antenna system in terms of efficiency and radiation pattern.

Fresno Amateur Radio Club

Subject: Ross Award Terms of Reference

J. Allen Ross Award

Criteria for Selection (As voted by the Board)

To qualify for the J. Allen Ross Award, a member must:

Be a member for 5 continuous years.

The current president is not eligible.

Must have shown exemplary activity, such as, but not limited to:

Officer/member of the board of directors

Involvement in Field Day Activities

Service to members (antennas – elmer)

Volunteer Examiner

Club recycling program

Technical activities (repeater, equipment repair etc.)

Public Service – RACES etc.

Consideration of this award should not be limited to activity for the past year only, but for exemplary activity performed for several years.

Cannot be received more than once.

The award committee should consist of the past 2 recipients plus the current president.

The J. Allen Ross Award will be presented at the annual Christmas dinner/awards banquet.

The recipient's name will be withheld from the general membership and will remain confidential until the date of receipt.

The award committee shall designate one of its members to make the presentation at the awards dinner.

In the event of a disputed award, the decision of the board will prevail.

A perpetual trophy will be awarded and a personal plaque will be given to the recipient. The trophy will remain property of the club.

Tube of the Month

4X500A/F

In late 1945, EIMAC was busy developing a new line of power tetrodes. One concept was to make the plate structure external. Experiments were made using copper strap folded back on itself to make a plate that cooling air could be forced through.

The X-429 in the first illustration, was made in San Bruno, California. in February, 1946 (B6 on the glass).

The final 500-watt tube was introduced in [1947](#) as the [4X500A](#) using the same odd 4 pin base as the experimental tubes used, but with a larger and stronger external plate.

It was marketed for TV and FM use in VHF up to 120 MHz in class C and 220 MHz in class B TV video amplifier service. The external anode also allowed its incorporation in a VHF cavity. The tubular shape allowed a resonate pipe or cylinder to directly mount to it or "plumber's delight" construction that became very popular with hams using 2 meters.

The final version could use a maximum of 4000 volts on the plate at 350 ma. The filament was 5 volts at 13.5 amps. Several other manufacturers made this tube for many years. In Europe, the tube is the QBL4/800.

It was one of the last glass tubes that was still being re-built as there was a commercial demand.

The special base was a problem with cash starved hams and was never promoted for amateur use. To make it more useable, they made the [4X500F](#) that sported the common 5 pin base that was used on the 4-250A and 4-400A tubes that hams were very familiar with. It never caught on and the "F" tube is very scarce today.

Visit the museum at N6JV.com



Fresno Amateur Radio Club



TELEWAVE, INC.
Wireless Communications Manufacturer since 1972

Designs & Manufactures
High-Quality Radio System Products for the
AMATEUR RADIO INDUSTRY

Transmitter Combiners • Antennas • Filters • Wattmeters • RF Power Monitors
Celloco • High-Q Cavities • Preamplifiers • IM Suppression • Receiver Multicouplers • Preselectors
Duplexers • RF Loads & Terminations • Isolators • Wireless System Engineering

► Order Today! 800-331-3396 ◀

660 Giguere Court, San Jose, CA 95133
Email: sales@telewave.com • <http://www.telewave.com>

CMAS Contract # 3-06-58-0122B GSA Contract # GS-35F-0248J

Anything to sell? Send info to
k6mi@pacbell.net for next month's
Skip

Your add or card here!
Talk to the treasurer about the yearly fee!

Looking for input, stories or pictures or just a sen-
tence about your ham activities this month for the
next. Skip.
Thanks, John K6MI

For Sale: Yaesu FT-847
All mode--160m-10m+WARC, 6m,
2m, 70cm
\$700 OBO
contact: Richard (559) 285-9772
or rpolson47@gmail.com

Tnx/73 N6FUB



M² ANTENNA SYSTEMS, INC. Michael Staal
V.P. & Designer
K6MYC

- Antenna Design & Production from
DC to Microwave
- Machine Work & Manufacturing Services
- System setup & Installations

4402 N. Selland Ave. Fresno, CA 93722
559.432.8873 Fax 559.432.3059 website: www.m2inc.com

For Sale
Yaesu Digital Voice Recorder
Fits FT-900, FT-1000 and FT-1000D
Have RTS program disk for Yaesu, Belfang, and some
other radios. If you need programming call me.
Want Bendix King programming cable for EPH HT.
Dennis KI6NVG 559 323-7386



ARRL Field Day
ARRL Field Day is the most
popular on-the-air event held
annually in the US and Canada.
On the fourth weekend of June,
more than 35,000 radio amateurs
gather with their clubs, groups or
simply with friends to operate from
remote locations.

ARRL FIELD DAY
2023
TUNE IN THE WORLD

2024 FD will be June
22-23

Always a good idea
to mark it on your
Calendar!

Fresno Amateur Radio Club

Dues due in January!

Fresno Amateur Radio Club — Membership Application

Name _____ Call _____ \$20 Dues ___ Date _____

Street Address City State Zip _____

Home Phone (____) _____ Cell Phone (____) _____

Email ADR _____ (for delivery of Skip Newsletter)

License Class _____ Year 1st Licensed _____ ARRL member _____

Birthday (Month/Day) _____ Wedding Anniversary (Month/Day) _____

Spouse's name _____

Additional licensed Family Member(s) in same household (\$5 each)

Name _____ Call _____ Birthday _____

Make checks out to: Fresno Amateur Radio Club, Inc. (Do not abbreviate)

FRESNO AMATEUR RADIO CLUB, INC.
P.O. Box 5912
Fresno, CA 93755-5912

