



Meeting location! East of Hwy. 41 on Shaw Av.
7 P.M. on the second Friday of the month at the University of California Center at 550 E. Shaw.

President's notes:

While a lot of new stuff has come into being, some of us old timers remember building a lot of our gear. As I read the pages of QST [who doesn't?] I see some "home-brew" articles that require a bit of soldering. So I am sending Skip an article about soldering-not from a Ham point of view, but from another hobby that some of us enjoy-model railroading.

What is great is that a lot of the tips and techniques that apply there apply to ham radio as well.

As some of you computer buffs know, computer stuff has invaded Model Railroading there as well. It is a whole new different world out there, folks, so let's get to it and learn what we can.

Speaking of learning I have been helping a Boy Scout work on his merit Badge in Ham Radio. OOPS, they call it amateur radio. Whatever you want to call it, it is fun to go over a lot of the basic premises and acquaint ourselves with a lot of that stuff. Have you read your handbook lately?

Well, I certainly hope that your station is located in a cool-that is, temperature wise, spot for operating, what with these sweater-less days we are having. So I do wish that all of you have a cool space to hang out and enjoy our hobby and its many facets.

I just learned of the passing of Jan Whitteberry WA6WTF-a great chap, a friendly and funny chap. We wish his wife Carol W6TTF. The very best as well as our condolences and prayers.

W. Stuart Home WB6VRJ

**AUGUST MEETING &
PICNIC INFO ON PAGE
2!**

2017 meetings! More great programs and events coming this year!



FARC General Meetings

are held the 2nd Friday of each month, 7 p.m. at the University of California Center on Shaw Ave. unless otherwise noted. Stay tuned in for new announcements.

2017 FARC BOARD MEETING DATES

1st Tuesday of each month this month at WB6VRJ's QTH.

FARC Nets

Morning Drive Time Net:
Weekday mornings-
7:30-8:00 a.m.
W6TO/R 146.940

Tech Net:

Wednesdays @ 7:00 pm
W6TO/R 146.940

FARC Net:

Sundays @ 7:00 pm
W6TO/R 146.940

In This Issue:

P.5 Testing Schedule and Tx Hunt Dates
P. 6-7 DX Info
P. 8-9 EMCOMM
P. 10 Tx Hunt results
P. 11 SK report
P. 12 July meeting pictures
P. 13 Test equipment stories
P. 14-15 How to solder
P. 17-18 Membership and Badge Info

July Meeting! Old Test Equipment night with Root beer floats.
 June 9th meeting- Coax troubleshooting with the MFJ -259
 The May speaker was Mark K6MTS, about "A QRP Backpacking Adventure in the High Sierra Wilderness".
 Mark's article on this subject was published in the February issue of CQ magazine this year.
 The April program was "The 811 Process, Know What's Below"
 The March program was a WSJT video by the author, Nobel Laureate, Joe Taylor, K1JT
 The February meeting was a presentation of the 220 Mc. Condor system.
 January program was about 6M FM, Alan WA6IPZ, speaker.



Our home made ice cream Specialists for the July meeting!

Coming attraction:

We will have a meeting on August 11th and the picnic on August 19th. So August will be a busy month.

For the August meeting Joe, WA6FFJ, has scheduled the program with Jim Anderson to speak on the Code Talkers service men that were used in WWI and WWII.

It works out that the Special Event Station N7C has their event on August 13-16 celebrating the service these men performed for the defense of our military, and the world.

August FARC Picnic at Ken, WA6OIB's Holden Rancherita Date: Aug. 19, Sat! FARC Club Picnic

Saturday August 19th at the Holden Rancherita. We're planning on starting at 4 P.M., eating at 5... Pot luck with club providing the main course... BBQ Tri-tip of course... Table service, and drinks.

Members should bring sides, salads, or desserts as per the schedule in Skip. Parking will be in the pasture as usual. Swimming for those who want. We now have Cafe lighting in the yard so Bingo will be a lot easier... Gotta have Bingo!!

Should be great fun!!!

A-M Appetizer or Salad N-Z Side dish or dessert
 Suggestions only... For organizational purposes so we don't overload or miss any category...
 Times: Start at 4pm... Eat at 5pm
 Swimming to stay cool is encouraged!!



2549 E. Copper , Clovis

Map available from QRZ.com, just log in with your call sign, and look up WA6OIB



More information on club badges on page 17! Renewal form on page 18!

FARC

Send your dues check to FARC, PO Box 5912, Fresno 93755-5912

Refer questions to Joe/WA6FFJ 288-2202 Board meeting on the first Tuesday at Stu's place.

2017 FARC BOARD OF DIRECTORS

FARC Officers and Board members:

| | | | |
|-------------------------------|-----------------|----------------|---------|
| Stuart Home, WB6VRJ President | wb6vrj@w6to.com | (559) 485-8659 | 12/2017 |
| Ken Holden, WA6OIB VP | wa6oib@w6to.com | (559) 323-6753 | 12/2018 |
| Joe Cardoza, WA6FFJ Sec. | wa6ffj@w6to.com | (599) 455-1071 | 12/2017 |
| Ron Hunt, N6MTS Treas. | n6mts@w6to.com | (559) 289-8514 | 12/2018 |
| Jim Erbe, W6NIF | w6nif@w6to.com | (559) 222-7524 | 12/2018 |
| Bob Sherwood, W6AIY | w6aiy@w6to.com | (559) 275-4319 | 12/2017 |
| Larry Kramer, K6VLF | k6vlf@w6to.com | (559) 264-0772 | 12/2017 |

Web master

| | | |
|-------------------|----------------|----------------|
| Aaron Lusk, K6USY | k6usy@w6to.com | (559) 301-1022 |
|-------------------|----------------|----------------|

Skip Editor

| | | |
|--------------------|------------------|----------------|
| John Morrice, K6MI | k6mi@pacbell.net | (559) 275-7373 |
|--------------------|------------------|----------------|



Ron, N6MTS
Treasurer



Joe, WA6FFJ
Secretary

Breakfast on Saturdays at Blueberry Hill located at Blackstone North of Shields, starting at 6:30 A.M.. Join the DX'ers and all the area hams for breakfast

Also Breakfast every Tuesday at 8 A.M. at *Denny's* near Shaw and West.

The Quarter Century Wireless Association Lunch is held on the fourth Tuesday of the month at Jeb's Blueberry Cafe on Blackstone at 11:30 to 1 P.M..

The Thursday ham radio lunch get-together meeting location is:

Jeb's Blueberry Hill
3851 North Blackstone Avenue
Fresno, CA 93726

Send Skip items to Skip editor John Morrice, K6MI at: k6mi@pacbell.net

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

Be a net control op! Contact Joe, WA6FFJ at: nailbender@unwiredbb.com.

Support our advertisers in SKIP. They support us not only in revenue for the club but they also allow us space on the counters and shelves for copies of SKIP and other club announcements.

Event-Date

FARC August picnic, Sat. Aug 19

FARC August 11 meeting 7 P.M.

Total eclipse in NA on Monday Aug 21.

Google :NASA eclipse 2017

FARC Sept. 8 meeting 7 P.M.

VHF Contest Sept. 9-10

Oct. FARC meeting Oct. 17

Nov. 11 FARC Swap Meet, Sat. 8 A.M.
(In place of the Nov. Meeting)

Nov. 11 T Hunt at the Swap Meet

Dec. 8 Club dinner Friday night



San Joaquin Valley Nets:

The Noontime net meets on 7.268.5 MHz. This net handles a lot of messages.

Daytime Region 6 Traffic Net meets daily at 3:30 pacific time on or near 7.275 MHz. This one is probably not in operation at this time.

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 3918khz, 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 3.856 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.

Local Amateur Radio Repeaters

| <u>Organization</u> | <u>Call Sign</u> | <u>Frequency</u> | <u>Offset</u> | <u>PL</u> |
|---------------------|-------------------|-------------------|---------------|-----------|
| CARP | K6ARP | 147.675 | - | 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 | 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 | N6HEW | 147.150 | + | 141.3 |
| SJVARs | KE6JZ | 146.820 | - | 141.3 |
| TURLOCK ARC | W6BXN | 147.030 | + | 100.0 |
| W6NIF | W6NIF | 444.100 | + | 100.0 |
| WINSsystem | K6JSI | 146.790 | - | 100.0 |
| WINSsystem | K6JSI | 444.250 | + | 100.0 |
| CVRC | K6WGJ Fresno Low | 145.43 | + | 141.3 |
| CVRC | N6VRC Meadow | 147.165 | + | 141.3 |
| CVRC | N6VRC Meadow | 440.025 | + | 141.3 |
| CVRC | N6VRC Santa Rita | 147.285 | + | 141.3 |
| CVRC | N6VRC Santa Rita | 442.275 | + | 141.3 |
| CVRC | N6VRC Visalia | 442.525 | + | 141.3 |
| CRVC | N6VRC Porterville | 443.825 | + | 141.3 |
| CVRC | K6WGJ Fresno Low | 444.975 | + | 141.3 |
| CVRC | N6VRC Bear Mt. | 443.950 | + | 141.3 |
| CVRC | N6VRC Mt. Bullion | 442.350 | + | 141.3 |
| CVRC | Bear | 927.05 | + | 141.3 |
| Meadow Lakes | WA6OIB | 146.61 | - | 141.3 |

Anniversaries:

8/21 Cis & Bob W6AIY
 8/22 Mary & John K6MI
 8/23 Norma & Ted W6TLM
 8/25 Larry WA6ZBL & Jamie N6PSB

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.

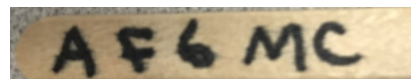
Joe, WA6FFJ, is our net control operator for the W6TO nets.

Birthdays

8/01 Dave KA6VTA
 8/05 Joe WB6JQC
 8/06 Ken WA6OIB
 8/18 Dennis KI6NVG
 8/18 Allen WA6IPZ
 8/24 Bob KF6HNL
 8/24 Clark KK6JQI

The monthly attendance prize!

The attendance prize in July was won by



who was not present. Must be present to win.

Attendance prize will be \$20 next month.



Fresno Amateur Radio Club

FRESNO AMATEUR RADIO CLUB, INC.

2017

Exams for all Amateur license classes will be conducted on the following dates in Fresno California. All exams are given on Saturday and begin at 9:30 AM.

August 19

November 18

LOCATION:Salvation Army Fresno Citadel, 1854 Fulton Street, Fresno CA 93721

DIRECTIONS: From North or South of Fresno, Take Highway 99 to Highway 180 east. Go east on 180 to Fulton Street off ramp. Turn right on Fulton Street. Go south on Fulton across Divisadero to Sacramento Ave. Turn left on Sacramento Ave and park. You have arrived.

Theory exams are multiple choice. First Class mail is used to send paperwork to ARRL, who sends data to FCC via electronic mail, thus assuring the fastest possible service on new licenses, which typically are posted to the FCC database by the end of the second week following the exam.

BRING. Two ID's, one with photo. Taxpayer ID Number (Social Security Number), or FCC Registration Number (**preferred**). Fee **\$15.00** per test session. Bring exact change. **Original and copy of Amateur License.** Talk in on 146.94 repeater.

Walk in's only, no pre-registration.

More Info?? Contact Charles, (559) 431-2038

T-HUNT

Membership in a radio club is not a requirement to join in on the fun, but a radio tuned to the hunt frequency of 146.565 MHz is.

Upcoming Transmitter Hunt Dates

- Please arrive early to check in for the Saturday hunts
- Please use and monitor the K6ARP repeater during the hunt for voice communication.

Future hunt dates:

Nov. 11 (at the FARC Swap meet)

Check out the story of the last hunt on page 10



THE DX CORNER

By Charles McConnell W6DPD

August 2017

"DX is the one you want but you don't have. That is the way it has always been, that is the way it will always be." Of the most recent DXpeditions, "If you worked it, it was the best DXpedition ever. If you missed it, it was probably not so good." "And so it goes."

All things are relative, some more than others. Thanks Hugh Cassidy, WA6AUD SK.

If you want help with DX, you can contact the local members of the Central California DX Club for some assistance. Charles W6DPD 431-2038, or Perry K6XJ 299-2802, can give you advice. The big thing about finding DX is to tune the bands.

The DX Breakfast is every Saturday at Jeb's Blueberry Hill Café, 3851 N. Blackstone Ave in Fresno. This group gathers about 06:30 AM. All are welcome.

Check out www.spaceweather.com and www.solarham.net for information on the solar cycle. The higher the solar flux and the lower the A and K Indices, the better the band conditions. As the solar cycle heads toward the minimum by the end of the decade, working DX becomes more of a challenge. The high bands become less useful until the solar cycle heads toward the maximum, some years from now.

The address of the Sixth District QSL Bureau is P. O. Box 970, Fairfax CA 94978-0970. You can send up to 10 address labels and \$0.80 for each envelope to the address above. They will put 1 unit of First Class postage on the envelope. You can contribute \$10 or \$20 online using Paypal. If you work DX, you should have envelopes at the bureau so you can get your cards. You may be able to check your status at the bureau at <http://www.qslbureau.org/>

The ARRL Outgoing QSL Service has raised the rates, effective November 1, 2016, for sending ARRL members QSL cards to foreign countries. The new rate is \$1.15 per ounce, about 10 cards. There is now a \$7.00 transaction fee for each submission. Sending one ounce of cards (about 10) will now cost \$8.15. Ten ounces of cards would cost \$11.50 plus \$7.00.

U.S. Postage has been increased. Overseas postage is \$1.15; domestic postage is \$0.49 for 1 ounce. Additional ounce for domestic mail will be \$0.21. Postcards are \$0.34.

If you don't get a DX Bulletin and you belong to ARRL, you should register on the members only web page and check the box for the ARRL DX Bulletin. This one is emailed each Thursday.

Or you can go to the ARRL web page in the News/ Bulletin section and view the bulletins there. You can also read the OPDX Bulletin or the 425 DX Bulletin on the web. Search OP DX Bulletin or 425 DX Bulletin to get the URL. You can subscribe to the Daily DX, Weekly DX or QRZ DX too. These bulletins will keep you informed of DX operations and QSL information.

Fresno Amateur Radio Club

Continued from the last page

The following operations are scheduled:

Djibouti **J28PJ** for 3 to 5 years

Djibouti **J28ND** Now

Ascension Island **ZD8D** maybe an October 2011 start

Angola **D2CQ** February 2010 for a few years

Gabon **TR8CA** September 15 for 4 years

Guinea Bissau **J5T** by Italian DX Team Delayed to late 2017

Faroe Islands **OY/CT1BWW** August 1 to August 10, 2017

Central Kiribati **T31** Planning for sometime in 2017

Botswana **A25AL** September 7 to September 15, 2017

Botswana **A25BI**, **A25SP**, **A25BE** September 15 to September 25, 2017

Mauritania **5T50K** September 18 to September 26, 2017

Samoa **5W0RA** September 9 to September 28, 2017

Galapagos Islands **HC8M** September 14 to 21, 2017

Temotu Province **H40GC** September 30 to October 20, 2017

Guinea **3XY4D** October 27, through November, 2017

Temotu **H40GC** October 3 to October 17, 2017

Christmas Island **VK9XI** October 3 to October 10, 2017

Cocos-Keeling Island **VK9CI** October 10 to October 17, 2017

Cocos-Keeling Island **VK9CZ** October 23 to November 6, 2017

Agalega & St. Brandon **3B6**, **3B7** October 17 to October 29, 2017

Guinea-Bissau **J5T** November 2017

Mellish Reef **VK9AA** November 3 to November 16, 2017

Burundi **9U4M** November 6 to November 17, 2017

Rodrigues Island **3B9HA** No licenses have been issue for Rodrigues Isl

Spratly Islands **9M0W** March 10 to March 20, 2018

West Malaysia **9M2MRS** December 1, 2017 through January 2018

Bouvet **3Y0Z** Planning for late 2017 or early 2018

Trinidad **ZZ0T** sometime in 2018

Vanuatu **YJ0G** March 2 to March 19, 2018

Baker Howland **KH1** In the planning stages now



Charles, W6DPD

Watch the DX Bulletins for up to date information. As the time for the operation is at hand, watch the DX Summit (www.newdxsummit.fi) for listings. There are a number of state QSO parties each year.

Check the contest corral in QST or the ARRL web page.



State QSO parties are a good place to collect states for your Worked All States award. ARRL Log Book of the World now supports the Worked All States Award and the WPX Award.

Good luck, tune the dial, and listen.

Did you think you had enough antennas on your car?

Fresno Amateur Radio Club



EC Report for July 2017

Hi All,

The schedule for the month of July was: 4 Monday Night EmComm Nets and 1 EmComm and Coffee, 1 EmComm Monthly Meeting, and 1 public service event.

Change of Venue

August 1st we will be changing our meeting location from The Salvation Army Citadel on Fulton St. to the **Hinds Hospice Building at 2490 W. Shaw in Fresno**. The change was made due to the fact that the new major, who is in command of the Fresno Citadel, wants to start charging us \$150 each time we use the facility.

We as ARES/RACES Group do not have the funding to stay. We do thank the Salvation Army for the years of support which we have enjoyed in the past, and if the next officer is more Ham friendly, we might be able to return.

Public Service Calendar **Upcoming EMCOMM Events**

July 29, 2017 – Tour de Lakes

September 16, 2017 - Tour de Fresno Bicycle Ride

October 14, 2017 - Bass Lake Double Century Bicycle Ride

If you are interested in the working any of the events please either go to the CARP website or contact me.

Continued on the next page

Continued from previous page

EmComm Website

We are now posting events and meetings on the calendar as well as posting articles on the home page. Check us out at fcmcomm.org.

Tour de Lakes

This year CARP (Clovis Amateur Radio Pioneers) was asked to supply health and welfare communication for the Tour de Lakes Ride sponsored by the Fresno Cycling Club. This ride had not been done by CARP before. Rob had to put a communication plan together at the last minute, he did a great job.

The ride started at the Dinkey Creek Rd. rest stop area, ran to Courtright Lake, back to Wishon Lake and returned to the Dinkey Creek Rd. rest stop. The course covers about 57 miles.

This was another great training tool which let us practice our trade.

North SJV EC Summit

July 13th Gary (KI6OYW) and I attended the first North SJV Summit at the CHP Office in Oakhurst. Five of the 12 ECs in the SJV ARRL Section were present. This was a time for discussions concerning maintaining morale, training and levels of ARES member's qualifications. Some of the Counties have several levels of operators, this is a great idea to let us know what level of experience and training members have. When we are asked for mutual aid, the receiving party will know what your abilities are.

This was the first summit and there will be more to follow. Pacificon, Rally in the Valley, and quarterly meetings were discussed. It is great to be able to have a round table discussion with ECs from the other counties, exchange ideas, and put a face with the name and call.

Net Control Staff Needed

We are looking for volunteers to take a turn as net control on Monday nights. This is not a difficult task. We will provide the preamble and net roster. This is a great way to enhance your skills running a net for emergency situations. If you are interested, please contact Gary (KI6OYW) at 559-269-1340 or email g_greenberg@att.net

Our Calendar

Don't forget the **Monday Night EmComm Net** at 19:30 hr. on the 147.15 MHz PI 141.3. We have some good information and camaraderie. On the third Friday of the month there is the **EmComm & Coffee** at YFC on Cedar south of Ashlan in Granite Park at 07:00hr.

And last but not least the EmComm Meetings are held on the Fourth Thursday of month. Our next meeting will be **August 24, 2017 at 1900 hr.** at the **Hinds Hospice Building, 2490 W. Shaw Fresno.**

Best of 73's
GLEN CAINE (N6HEW)
Fresno County RACES Officer
Fresno County ARES EC
559-999-7590
N6HEW2@gmail.com

Glen, N6HEW talking to Ron, N6MTS



Fresno Amateur Radio Club

Simplex Frequencies:

6 Meters 50.125MC. and up SSB, 52.525 FM
2m 144.2 and up SSB, 146.52 and up for
FM (any FM SX)
220Mc. 222.1 SSB, 223.5 FM
440 432.1 SSB, 446.0 FM
902.1 SSB, 927.5 or 927.6 FM
1.296.1 SSB, 1.294.5 FM

The July 11 Hidden Transmitter Hunt, followed by pizza was enjoyed by eight hunters and foxes. The hiding team was John, K6MI, and Eric, NI6G, who were the winners of the last hunt.

There were four transmitters, all on the same frequency, 146.565 Mc. They were on different time cycles, so it was tricky to tell which one was on at any given time.

Pictured above is the team that arrived first, lead by Rick, W6KKO, who was the eventual winner, being the first to find the last fox (left picture).

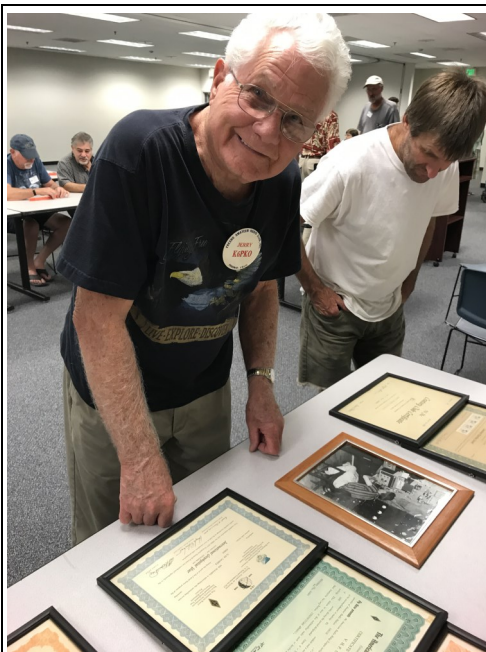
One of the transmitters was half way up a flag pole, which gave it some help in sending a stronger signal out to the hunters.

Two of the foxes were in bushes at the Inspiration Park, one of them near the Harmony Chimes.

The fourth transmitter was the most powerful, from the parking lot of the park. This is the signal that was heard at the beginning of the hunt at the starting point.



Fresno Amateur Radio Club



**Clem,
K6GOX
(SK)**

At the July meeting a table honoring the life of local ham K6GOX showed pictures and certificates of his ham career. He was active on 6 meters, and was one of the first to

work all states on that band.

Pictured above is Jerry, K6PKO, and Larry, K6VLF, looking at the display.



WA6WTF (SK)

Jan's online obituary is up on the Wildrose Funeral Chapel website <http://www.wildrosechapel.com>.

In lieu of flowers, please make a charitable donation in his memory. These were his favorites:

| | | |
|-----------------------|--------------------------------|-----|
| ARRL Education Fund | Legion of Valor Museum, Fresno | The |
| Shrine of St. Therese | Salvation Army | |

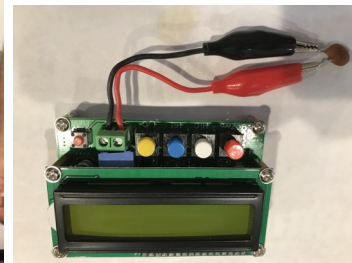
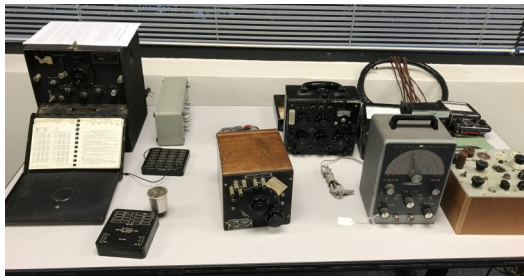
A Celebration of Life is planned for 9/3/17 (Sunday of Labor Day Weekend) at 3 pm at our house. More details will be forthcoming as the date draws closer. As you all know, the party is what Jan would most enjoy.

KC6LQV (SK)

Renny Thomas was here in Fresno for a short time in the mid 90s. No it is not Ray KB6LQV just KC6LQV with a similar callsign. He was a FARC member at that time, and was also a volunteer for State RACES here in Fresno.



Fresno Amateur Radio Club



Pictures of the July club meeting!

Test equipment and stories, ice cream floats, first prize winner Larry, KK6YTG, and Jerry, K6PKO, winning a can of WD40.

North American QSO Party, RTTY - July

Call: N2NS Class: Single Op LP Operating

Time (hrs): 3:42

Band QSOs Mults

40: 24 14

20: 157 41

15: 22 15 Total: 203 70 Total Score = 14,210

Comments: Late start/early finish. Mostly mid/late afternoon. QRT well before s/s, so no 80m. 10m apparently gone before I got on. K3/P3, N1MM+/MMTTY

Call: K6MI Class: Single Op LP QTH: SJV Operating Time (hrs): 2

Band QSOs Mults

20: 30 23

15: 5 5 Total: 35 28 Total Score = 980

Comments: Always amazed at everyone else's great score.

IARU HF World Championship

Call: N2NS Class: SOAB(A)CW HP QTH: Zone 6 Operating Time (hrs): 2.3

Band CW Qs Ph Qs Zones HQ Mults

160: 1 1 0

80: 5 3 2

40: 15 9 3

20: 56 17 28

15: 21 12 5

10: 3 3 0 Total: 101 0 45 38 Total Score = 24,319

Comments: Another short token effort. 20m was hopping to both EU and AS mid-evening Sat when I was briefly on. 80 and 160 both noisy and limited activity heard outside NA.

Fresno Amateur Radio Club

Old test equipment was the subject of the July club meeting, and a number of stories came along with the equipment. On the RIGHT, and going clockwise, is Joe, WA6FFJ, who explained about the pair of pliers that his boss used to cut a piece of Romex, which happened to be alive at the time. He has saved the pliers ever since to remind him to be careful.

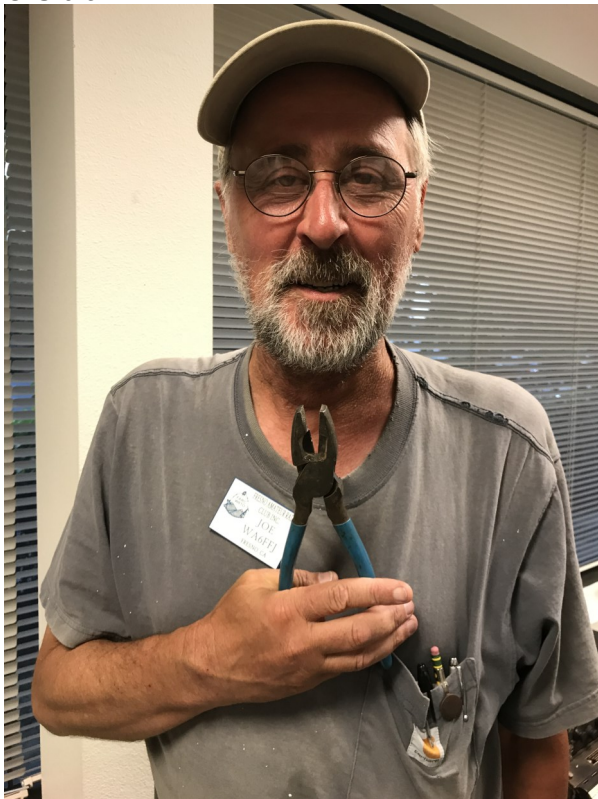
Next is John, K6MI, showing a beautiful inductor in a wood case.

Joe, W0PJD, had an audio signal tracer that was useful for all sorts of tracing in wires and tube radios.

Ken, WA6OIB had a variety of tube checkers and test gear that had seen much use over the years, including color bar test sets and degaussing loops.

Jim, W6NIF, brought an old signal generator, useful for making sure your receiver was calibrated.

Last year in July it was Heathkit night. Anyone have suggestions for next year?



Seven tips for better solder connections

Soldering is one of the skills every model railroader needs. When building a layout, soldered track feeders, rail joiners, and electrical connections are necessary for reliable Digital Command Control (DCC) operations.

In addition, almost all DCC decoder installations require soldering at some point to add lights, speakers, connectors, and extra functions. Let's take a look at some of the tools that will make your job easier, and I'll give you some tips on their use.

The most obvious tool is a good soldering iron. Fortunately we have a wide array of electronic soldering irons to choose from, but how do you choose? As with most situations, you need to match the tool with the job.

Small electrical components and delicate 28AWG wires call for small, low wattage irons. However, soldering track feeders and rail joiners works best when you can put a lot of heat on the spot and get out before your ties turn into a pile of molten plastic or charred wood. So how big an assortment of soldering irons do you need and which sizes do you need?

While you can purchase an assortment of irons of different wattages, I prefer a more flexible approach – a soldering station like my Weller WLC100 ①. This reliable tool can be adjusted over a range of 5 to 40 watts, giving a maximum temperature of about 900 degrees F.

In addition, Weller designed the handpiece to accept a variety of tips so you can customize it for the job. I typically use a small pencil tip for delicate work and move up to a larger flat screwdriver tip for rail joiners and other projects requiring a lot of heat ①. The heating element is replaceable and can be purchased separately should you ever burn one out (I've replaced only one in 10 years of heavy use).



Solder varies in composition, with tin and lead in a 60:40 ratio commonly used for most model railroading purposes. However, 63:37 solder is also popular. An important distinction between these two formulations is that 60:40 solder has different temperatures at which it becomes a liquid and a solid, existing as a paste between these two points, whereas 63:37 solder passes from liquid to solid at 361 degrees F.

This is important, since if a 60:40 solder joint is moved while cooling, it might not form a solid connection, whereas the 63:37 solder solidifies immediately.

Hard solders often containing silver are also available and can have melting points near 900 degrees F. These would be used for making turnouts and detailing brass locomotives. Some people also prefer lead-free solders.

You can find solder in strips, bars, and wire rolls of varying diameters; only the latter is suitable for most model railroading jobs. For years I've been using a 1 pound spool of Kester 60:40 rosin core solder with a diameter of .022" ②. The small diameter makes it suitable for any job from soldering small electrical components to rail joiners and track feeders.

Because of the higher cost of solder containing silver (less than an ounce can cost as much as a full pound of 60:40 solder), I purchase silver solder as a small roll in a clear plastic dispenser ②.

① **The right tool for the job.** The Weller WLC100 soldering station can be adjusted over a range of 5 to 40 watts and has a built-in cleaning sponge holder. For the last few years Larry has used the brass turnings in a steel holder for cleaning tips. Pencil and flat screwdriver tips are available.

Flux is an important component of any solder job. It prevents the formation of metal oxides during heating and allows the solder to make a solid, electrically conductive joint.

There are two basic kinds of flux, acidic and non-acidic. Acid fluxes typically contain zinc chloride or other acidic compounds that can leave corrosive residues that are difficult to remove.

These residues can corrode solder joints long after the job is completed and lead to failure months or even years in the future. That's why they should never be used in any electrical work or model railroading in general.

The flux I recommend for model railroading is a non-corrosive rosin flux. Rosin flux is an extract of pine trees dissolved in a solvent such as alcohol. It's available in both liquid and paste formulations and leaves a non-corrosive residue that can be wiped away with alcohol.

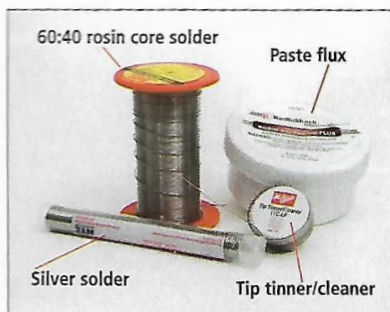
I use a rosin paste flux ② from RadioShack. This may be hard to find; however, similar products are available from electrical suppliers and on Amazon.com.

Working with fluxes is pretty straightforward, but you have to get the heat and

MORE ON THE WEB

Registered users can watch a video on soldering decoder connections at ModelRailroader.com

By Larry Puckett



2 Choose the best materials. Larry's go-to solder is this 1 pound roll of .022" diameter tin/lead 60:40 rosin core solder. The roll of silver bearing solder in the plastic tube is for special projects. Although the RadioShack rosin flux may be hard to find, similar products are available. The small container holds a mixture of rosin and solder powder for cleaning and tinning the tip in one step.

solder applied before you burn off all the flux. That's why it's important to use a soldering iron big enough to heat the work quickly and evenly without overheating the flux.

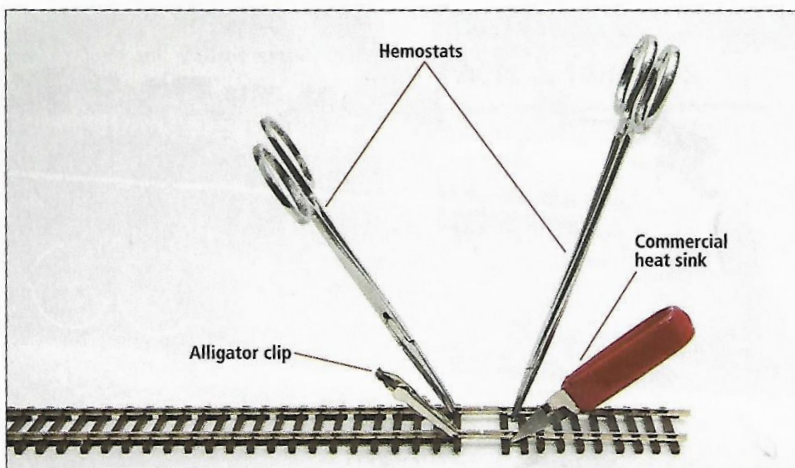
If you burn off the flux, then the metal is likely to oxidize before the solder joint is complete and the joint will be weak and prone to failure. This is one reason many people prefer rosin core solder, with the flux making up 1 to 3 percent of the wire. I also apply a small amount of paste solder on large joints as well.

In order to get a good solder joint, it's important to keep the soldering iron tip clean and tinned. The really important thing to remember is never use sandpaper or any other abrasive to clean the tip.

Soldering iron tips have a copper core covered with iron. If you sand off the iron coating, the tip will be ruined. Weller makes a cleaning bar specifically for cleaning really dirty tips, but if you use the right solder, flux, and regular cleaning, you should never need one.

For years my common cleaning practice was to keep a moist sponge next to the soldering iron and wipe off any excess solder or residue on the sponge between uses. The WLC100 comes with a built-in sponge holder **1**. Keep the sponge moist, not sopping wet, and the tip will come clean with a quick swipe.

More recently, however, I've been using a tip cleaner made of brass turnings in a metal holder **1**. A quick poke of the tip into the brass turnings will



3 Follow the proper procedures. Heat sinks clip onto metal objects being soldered and prevent excess heat from melting or burning ties or damaging sensitive electrical components. Hemostats work well, but alligator clips or commercial heat sinks are smaller and are less likely to get in the way.

remove any excess solder and residues, and you don't have to worry about keeping a sponge moist.

Tinning is the process of applying a small amount of solder to the soldering iron tip. This makes it easier to apply heat quickly to the components being joined. It's a good idea to always tin the tip before turning the soldering iron off. The solder protects the tip from oxidation and will prolong its useful life.

Weller and a number of other companies sell a tip cleaner/tinning paste comprising mainly flux with solder powder in it **2**. By plunging your hot soldering iron tip into the paste, the tip is cleaned and tinned.

Avoiding damage to surrounding materials is another concern when soldering near plastic ties or anything else that can be burned, melted, or distorted. While it's important to quickly apply a lot of heat to a joint, metal components will also conduct that heat to other areas, which can result in damage.

To avoid this problem I always use heat sinks to isolate the area to be soldered. A heat sink can be something as simple as a piece of moist cotton cloth laid over the rails. Excess heat will be consumed by evaporating the water in the cloth, preventing damage elsewhere.

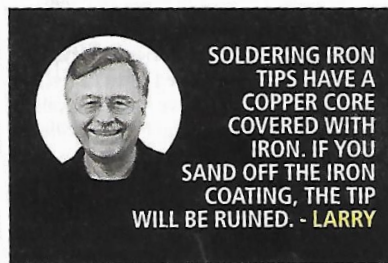
You can also use hemostats clamped on either side of the joint. A couple of small alligator clips or commercial heat sinks will likewise effectively intercept excess heat and are less likely to get in the way while soldering **3**.

For most solder joints, I apply a small amount of paste flux using a small brush and quickly heat the joint with the correct iron tip. I regularly test the joint by touching the end of a piece of solder wire to it.

As soon as the solder melts and starts to flow, I quickly apply as much solder as I feel necessary, then keep the work perfectly still while the solder cools. If you move the work before the solder solidifies, you may get a weak joint.

One sign of a good joint is a shiny surface appearance. A dull appearance indicates a weak joint, but that can be corrected by quickly reheating the solder and holding it perfectly still. A quick scrub with alcohol on a stiff brush afterward will remove any rosin flux residue.

For more on soldering, visit my website at www.dccguy.com or pick up a copy of my book *Wiring Your Model Railroad*, available from Kalmbach Books. **MR**



Fresno Amateur Radio Club

2050 H ST.
FRESNO
93721



500 E. 19TH ST.
BAKERSFIELD
93305

Jack C. Arbuckle Company

CENTRAL CALIFORNIA DISTRIBUTORS OF
ELECTRONICS FOR RETAILERS AND INDUSTRY
WWW.JCAELECTRONICS.COM

JEFF MOORHEAD
BRANCH MANAGER - FRESNO
SALES@JCAELECTRONICS.COM

FRESNO
(559) 264-6554
FAX (559) 264-6557

Thomas L. Whitlock



WHITCOMM
ELECTRONICS

Parts & Supplies Distributor

105 W. DAKOTA, #106 • CLOVIS, CA 93612 • 559/294-0977

Your add or card here!
Talk to Ron, N6MTS, about the yearly fee!



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



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
Cello • 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>



Central Valley's CB & Ham Radio Headquarters

SALES • SERVICE • INSTALLATION

(559) 277-4RED (4733)
www.redmonkeycb.com

3439 S. Chestnut Ave.
Fresno, CA 93725

Fresno Amateur Radio Club

FRESNO AMATEUR RADIO CLUB INC.
NAME TAG.

FARC Name tags are \$10.00 Payable when you order your tag.

Please list your Name and call as you want it to appear on the name tag and also check if you want a stick pin or mag mount.

Make check payable to FARC Inc. and send the form and check to:

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

or bring it to the next meeting.



Name_____

Call_____

Stick pin_____ or Mag Mount_____ Amount \$_____

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

Fresno Amateur Radio Club

F.A.R.C. DUES ARE \$20 PER YEAR FOR FULL MEMBERSHIP. Additional family members in the same household are \$5.00 each per year. New hams are free for the first year. Make checks payable to F.A.R.C. and

send to:

P.O. Box 5912, Fresno, CA 93755-5912.

Fresno Amateur Radio Club Activities and Events

**Meetings on the
2nd Friday of the
month**

**FD on the 4th full
weekend in June**

**Banquet Dinner
in December**

**Club Picnic in
summer**

**Annual swap
meet in Novem-
ber**

Fresno Amateur Radio Club - Membership Application

Name _____ Date _____
Address _____ Call Sign _____
City _____ State _____ ZIP _____
Home Phone _____ Cell Phone _____
Occupation _____ Birthdate _____
License Class _____ Year 1st Licensed _____
ARRL Member? _____
E-mail address _____ Anniversary Date _____

Additional Family Member in same household:

Spouse Name _____ Call Sign _____
Son/Daughter Name _____ Call Sign _____



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

Send To: