



May 2002

Fresno Amateur Radio Club Newsletter

Volume 63, Issue 5

HAMFEST

Saturday May 4—See Page 5 for Details

No Meeting this Month.
Next General Meeting is August

Weekly Gatherings

Country Waffles:

Saturday & Monday mornings-7:00 a.m.
Corner of Blackstone & Dakota

Silver Dollar Hofbrau:

Thursdays @ Noon.
Corner of Hwy 41 & Shaw

"The Prez Sez"

One last reminder, Hamfest is Saturday May 4th. The swap starts first thing Saturday morning. Pat has purchased some very nice prizes for the drawings. Starting with the ever popular 20 amp power supplies, 100 foot rolls of coax, w/ UHF connectors., 24 hr. MFJ clocks, Alpha-Delta 4 position antenna switches, vertical antennas plus lot's of other great Ham prizes. Be sure and check in on 146.940 - repeater for the radio raffle for more Ham prizes. If that wasn't enough , you won't want to miss out on our jumbo tri-tip lunch, cooked by our very own Ken Holden. We will also have coffee and donuts available early Saturday morning. There will be a bunch of us staying over Friday night, so come down and join us. Make your over night reservations with Riverland Resort.

Continue to save your paper and cans for our new scholarship fund. This is a real important project, one that will help some deserving student at Fesno City college.

It has been brought to my attention that we may have some improper repeater operation going on. You should all know the F.C.C. rules governing repeaters. Make sure you using it properly if in doubt (don't say it.)

Well that's it for this month see you all at the BIG FRESNO AMATEUR RADIO CLUBS HAMFEST.

73 s Harold KF6CL



California Café

at

CEDAR LANES

3131 N. CEDAR
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PHONE : 559 - 222-4424
FAX: 559 - 222-4825



The Fresno Amateur Radio Club meets at Cedar Lanes the 2nd Friday of each month unless otherwise noted.

Fresno Amateur Radio Club, Inc.

P.O. Box 783, Fresno, Ca. 93720-0783

BOARD OF DIRECTORS

President: Harold Reeks KF6CL
(559) 224-0288

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Secretary: Jim Haynes KA6J
(559) 294-8390
ka6j@attbi.com

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Ken Holden WA6OIB.....(559) 323-6753
Chuck McConnell W6DPD(559) 431-2038
John Morrice K6MI(559) 275-7373
John Pritchett W6JWK.....(559) 222-6793

ARRL

Join the ARRL through FARC!
The Club benefits with each NEW membership.
Send completed ARRL membership form with pay-
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Treasurer's Report:

4/20/2002, For The Month through- April 20, 2002

Income:\$ 409.45
Expenses:\$ 1,455.71
Checking:\$ 2,867.37
Savings:\$ 3,989.90
Petty Cash:\$ 50.00
Total:\$ 7,316.72

Papers and Cans Thus Far This Year: \$336.90

F.A.R.C. Membership: 200

Advertise in SKIP!

Annual Rates effective June 2002

Business Card Size Ad\$25.00
1/4 Page Size Ad\$35.00
1/2 Page Size Ad\$65.00
Full Page Size Ad.....\$100.00

Contact Kim Davis, KF6ZSW
kdavis@gotnet.net—(559) 230-8209

Club Contacts

Papers & Cans Collections Contact:

Ted Miller K6FGE (559) 431-1441

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k6qi@attbi.com

VE Corner

Amateur Radio VE Exams in Fresno
Unlicensed thru Extra Class
Fresno Amateur Radio Club – A.R.R.L. VEC

Exams for all Amateur license classes will be conducted on the following dates in Fresno, California. Exams are given on Sunday and Begin at 1:00 P.M.

- May 5
- August 4
- November 3

Theory Exams are multiple choice. Code Exam is fill in the blank.

Location: Seventh Day Adventist Central Church, 2980 East Yale, Fresno CA 93703. One block south of Clinton and one block west of First Street, southwest corner of Yale and Orchard. Watch for signs.

Directions: From Hwy 99, take Clinton Ave. exit east four miles to First St., turn right (South), one block right on Yale, one block. Look for Signs. From Highway 41, take Shields Ave exit, turn right (East), 1 mile to First St., turn right, continue one block past Clinton, right on Yale to Orchard. Look for Signs.

Bring: Two ID's, one with photo. Taxpayer ID Number (Social Security Number) or ULS registration number. Fee is \$10.00 per test session. Original copy of Amateur License and CSCE's if upgrading.

Talk in on W6TO/R 146.94/64 repeater.

Walk-in's only, no pre-registration.

More info contact Chuck, W6DPD, 559-431-2038

Worldradio

Subscribe or renew through FARC.

Make check out to F.A.R.C. mail with Worldradio form to:

F.A.R.C.

PO Box 783,

Fresno, CA 93712

The club benefits with each one processed

Field Day Is on June 21-23

Pine Ridge School.

Committee Meeting, 5:30 PM, May 8 at The CA Cafe in Cedar Lanes.

Committee Members thus far: Burt, WA6PTG; Richard, KE6SHL; and Kim, KF6ZSW.

Contact Burt, 226-4136 or Kim, 645-6849 for info.

Email

Please send us your email addresses.

We will be adding them to the club database for use in future club activities.

Email to: Kim Davis @ kdavis@gotnet.net



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Local Amateur Radio Repeaters

<u>Organization</u>	<u>Call sign</u>	<u>Location</u>	<u>Frequency</u>	<u>offset</u>	<u>Tone</u>	
Bulldog Repeater	N6MTS	Fresno State	145.230	-	141.3	
Central Cal Amateur Communications		Meadow Lakes	146.790	-	141.3	
		Meadow Lakes	223.780	-	141.3	
		Meadow Lakes	444.250	+	141.3	
		Meadow Lakes	147.675	-	141.3	
		Meadow Lakes	444.725	+	141.3	
Clovis Amateur Radio Pioneers (CARP)		Meadow Lakes	1286.300	-	141.3	
		Joaquin Ridge	145.430	-	67.0	
		Joaquin Ridge	224.880	-	141.3	
		Joaquin Ridge	440.350	+	141.3	
		Fresno Amateur Radio Club (FARC)	W6TO	Meadow Lakes	146.940	-
Kings Amateur Radio Club (KARC)	KA6Q	Hanford	223.940	-	none	
			444.200	+	141.3	
			Castle Peak	145.110	-	100.0
			Castle Peak	147.240	+	100.0
Madera County Amateur Radio Club (MCARC)	W6WGZ	Santa Rita Peak	224.440	-	100.0	
			147.180	+	none	
			441.175	-	146.2	
Fresno County RACES	N6HEW		147.150	+	141.3	
Tulare County Amateur Radio Club	WA6BAI	Blue Ridge	146.88	-	103.5	



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**FRESNO AMATEUR RADIO CLUB
PRESENTS THE 60TH ANNUAL
HAMFEST AND SWAPFEST**

Hamfest 2002 will be held on May 4th at The Riverland Resort, 38743 Highway 99 Kingsburg/20 miles South of Fresno on Highway 99, and we hope to see all of you there.

Overnight camping is available. Come in Friday afternoon and join the crowd. We are planning some fun activities for Friday evening. You must make your camping reservations with Riverland Resort, (559) 897-5166 or www.riverlandresorts.com.

Huge selection of raffle prizes: power supplies, antennas (UHF, VHF, HF), and much more!!!!

Drawings on the hour.

Donuts, coffee, and juice available at 6:30 AM - 9:15 AM. Coffee/donut combo: \$1.00 (refills on coffee, \$.25) and juice \$.50. Soda will be available for a \$1 a can starting at 9:15 AM.

Free swap/vendor spaces starting at 7 AM.

The W6TO special event station will have the annual radio raffle; talk in on 146.940.

W6DPD, Chuck McConnell will coordinate QSL card verification for DXCC, WAS, VUCC, and WAZ from 10 AM to 11 AM. Please have forms, fees and envelopes ready.

KG6DGW, Mike Stroud and WA6PTG, Burt Wilcox will be coordinating the hidden transmitter hunt.

WA6OIB, Ken Holden will be preparing his famous jumbo tri-tip sandwiches. Lunch will be available by 11:30 AM.

Kim Davis/KF6ZSW

May Birthday Greetings to:

KR6KR, Charlie Perkins; KG6ALC, Daniel Pruitt; AJ6X, Don Burr; KC6LPL, Ed Cutler, Sr.; AC6FD, Ed Cotters; KF6JSL, Edna Epps; KQ6TG, Gordon Keeton; K6ZNJ, Greg Gleichweit; W6MRP, Harold Pederson; KE6SHK, Jim Watkins; KA6J, Jim Haynes; W6JWK, John Pritchett; KA6LAC, Keith Graves; AC6WS, Lee Rhoys; KF6YLR, Rob Mavis; KQ6AF, Robert Peterson; and WB6QDN, Rod Benson.

F.A.R.C. Website

[Http://www.qsl.net/W6TO](http://www.qsl.net/W6TO)

**MARK YOUR CALENDARS FOR
UPCOMING FRESNO AMATEUR
RADIO CLUB EVENTS:**

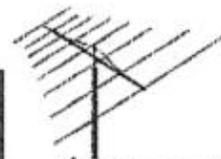
June 21-23	Field Day Pine Ridge School
July TBA	Club Picnic Ken, WA6OIB & Gwynne, WA6VZM Holden's
Aug. 9	Gen. Meeting Cedar Lanes
Sept. 13	Gen. Meeting Cedar Lanes
Oct. 11	Gen. Meeting Cedar Lanes
Nov. 8	Gen.Mt./Annual Swap Cedar Lanes
Dec. 14	Christmas Dinner/Awards TBA

FARC Badges



W6PSQ

Call Jimmie @ (559) 227-1057



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Wired for Sound: by Steve Lampen

What the heck does RG mean anyway? Also, where did it come from? RG means "radio guide" and was the original military specification for coax cable, starting in the 1930s. So what do all the numbers mean - RG-6, RG-8, RG-58, RG-59, RG-62, RG-122, RG-213, RG-405 and on and on? The number is just a page in a book. RG-1 was the first page (and obviously wasn't a very successful cable design). RG-6, the sixth page, was widely successful. Most CATV/broadband cable these days is RG-6.

RG#	Impedance	AWG	O.D. (in)
6	75	18	.275
8	50	10	.405
8X	50	19	.242
11	75	14	.405
58	50	24	.195

Since each RG number is just a page in a book, it really doesn't mean anything. That's why you can have RG-58, a 50-ohm design, right before RG-59, a 75-ohm design. Actually, I lie. As the specs read, RG-58 is a 53.5 ohm design.

Here is an example of things that went wrong: While the military can pick what ever it wants, and pay whatever it costs to have stuff built to match that impedance, the commercial world (your world) doesn't always have those options.

WHAT DO THESE NUMBERS MEAN? Remember, these descriptions are "general" descriptions. You can probably find exceptions to every one listed if you look hard enough. Remember that RG/Type can mean just about anything, and don't assume that all RG-58s (or any other number) are the same!

Other questions to ask: Is the conductor solid or stranded? If solid, is it bare copper, tinned copper, silver plated copper, copper-clad steel, or silver-coated copper-clad steel? If stranded, how many strands of what gauge and what are the strands made of?

Shielding is another area to explore. Is the shield braid, double braid, or braid and foil? What coverage is the braid and what is it made of? How many conductors of what size? Also study applications. It is unlikely you would any of the 93-ohm versions unless you are into old-time data wiring. Most likely, you'll stick to the 50-ohm/75-ohm varieties. Do not forget there are dozens, maybe even hundreds, of coaxial cable designs that don't fall under any RG or Mil spec. You should not limit yourself to just RG if you're searching for the perfect cable!

All systems you have are 50-ohm systems (on the transmit side). So 53.5 ohms would exhibit a fair amount of mismatch. But if you made a cable for 50 ohms, since you couldn't call it RG-58, you'd call it RG-58 Type. The word "Type" is the key. It means "sort of" in technical-ese. So our 50-ohm version is "sort of" like the RG-58 spec. Pretty lame, huh?

DIFFERENT JACKET. Oh, but that's not all: As the military itself changed the original spec, it brought out different versions. RG-58/A, RG-58/B, RG-58/C. And some of these could be considerably different from the original. One might have a stranded center conductor instead of a solid one. Or it might have a special jacket compound so the chemicals in the jacket would not contaminate the dielectric underneath, called a "non-contaminating" jacket.

And then, not long after World War II, the military decided that the RG system was getting too unwieldy (duh) so they abandoned the entire system and replaced it with the current system.

In the current Mil Spec, coax falls under the heading of C17. Each time the spec is changed, a new letter is added. We're currently under C17G. This spec supersedes everything written before - not just C17A through C17F, but all RG numbers as well. To the people who invented the RG system, RG means nothing. Of course, there were a few million customers, like you and me, who thought the RG numbers were fine. A large number of technicians who entered broadcasting after World War II came with extensive RG knowledge, so it was logical for those cables to continue. And, like any ancient religion, these numbers continue to be used (and modified) long after the High Priests (the military) had moved on.

DIFFICULT RATIO. One other question that often comes up: Why 50 ohms and 75 ohms, or any other impedance, for that matter? These impedances were not chosen by accident. It was known in the 1920s that cables of different impedance worked for one application than the other. For instance, it was determined, through experimentation, that the best power rating was around 30 ohms. Because the impedance of any coax cable is the ratio of the sizes of the center conductor and the distance to the braid (and the quality or "dielectric constant" of the plastic in between), you might wonder why we don't have 30-ohm coaxes.

To be sure, there are customers out there who would buy as much 30-ohm as we could make! The problem is that 30-ohms represents a ratio very difficult to make - so much so that it is quite likely most of what you would make, you would throw away. Only a small percentage would be usable. The people who would die for 30-ohm coax are really high-power people. Those are customers such as nuclear physicists (those with some kind of atom smasher) or medical scanners, such as X-ray, CAT scanners or NMRI machines. They all use high power and would love to have 30-ohm coax. It would deliver their voltage with even less loss (and higher efficiency).

Those customers who wanted low-signal attenuation found the ideal impedance was 77 ohms. but this was an odd number in terms of wire sizes. If you "fudged" just a bit to 75 ohms, then standard wires and dimensions could be used. This was why all those low-power, low-voltage signal-carrying cables (baseband video, CATV/broadband, antenna lead-in) were all 75-ohm.

And then there are customers who want to deliver high voltage; the ideal impedance for them is around 60 ohms. This is an eminently "makeable" cable, but it never really got started, mainly because it was soon realized that most high-voltage customers were often high-power customers too. Therefore, there really needed to be a compromise between voltage and current; that compromise was 50 ohms.

Steve Lampen is a senior audio video specialist for Belden Wire & Cable Co. in San Francisco. His book, "Wire, Cable, and Fiber Optics for Video and Audio Engineers," is published by McGraw-Hill.

Thanks to *The Common Ground*, the newsletter of the Hawaii West Amateur Radio Society for the preceding article.

BOARD MEETING MINUTES 4/4/2002

The meeting was called to order by President Harold, KF6CL at 07:05PM.

Members present: WA6HII, W6JWK, W7POR, KF6ZSW, KF6CL, W6YEP, W6DPD, WA6OIB, KA6J, K6MI, and guest Craig, K6QI. (Club webmaster).

Members absent: WS6X.

Review of the minutes from the previous board meeting. Approved as read.

Treasurer's report: Present paid membership 183. Income March 1 to April 4 is 887.73. Expenses over the same period are 175.00. Cash on hand 7948.63.

OLD BUSINESS:

Continued discussion over the SKIP expense. The board decided to poll the membership for those who would prefer electronic transmission. Craig, K6QI gave the board information pertaining to electronic transmission and posting of the SKIP on the FARC web page. Craig agreed to be available at the next general meeting to answer any questions the members may have pertaining to getting the electronic version. Craig also made mention that the old web page needs to be shut down as the information is dated and it is interfering with the various search engines. Ken, WA6OIB will contact Bob to facilitate removing the old web page.

Harold, KF6CL is continuing to get the W6TO plates assigned to the CW trailer.

Harold, KF6CL reported on the 'Policies of the Board of Directors' changes for items 6 and 10. Item #6- "All SKIP articles must be signed by the author if printed" Item #10- "Newly licensed amateurs in the Fresno area will be given full membership in FARC for the remainder of the calendar year in which they receive their ham license. Proof of license required.

Phone patch: The repeater phone patch needs a new location. K6MI agreed to take the patch to his home and investigate installation.

Hamfest Report: Pat W6YEP reports that the prizes have been purchased. We still need some directors' prizes. There is a need for someone to do the coffee and doughnuts Saturday morning. The price has been set for a cup of coffee and a doughnut at 1.00. Price on cold drinks will also be 1.00. No discussion on the price of the luncheon. Harold, KF6CL will provide all the necessary signs for the hamfest. As of this writing all advertising flyers have been printed.

NEW BUSINESS:

Papers and Cans: There was discussion on how to disperse the paper and can moneys. A scholarship fund was suggested by Chuck, W6DPD as well as the possibility of the purchase of a new trailer for storage and field day use by John, W6JWK. It was also mentioned that the club soon would not be able to provide pick up service of donated papers and cans, as it is becoming cost and time prohibitive. All future donations will have to be brought to the club meeting(s).

Scholarship: After many sessions of debate and discussion, there was a motion by W7POR to set up a Fresno City College scholarship, funded from a portion of the paper and can sales. The recipient must comply with stipulations including, but not limited to, having a major in a technical field, preferably electronics. This scholarship, in the name of the Fresno Amateur Radio Club, will initially be in the amount of 250.00. Second by John, W6JWK. Motion unanimously carried. The above decision will be discussed in length with the general membership at the next meeting.

Christmas Dinner: Set for the second Saturday in December. Possible locations discussed were the Santa Fe Basque, and Cedar Lanes. Kim, KF6ZSW will investigate the options and report back to the board at the next meeting.

Motion to close the meeting by Ken, WA6OIB at 08:59PM. Second by Gene, W7POR. Meeting adjourned.

Respectfully submitted,
Jim Haynes—KA6J, Secretary



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2002 F.A.R.C. MEMBERSHIP APPLICATION

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Occupation _____ Birthdate: _____

License Class: _____ Year First Licensed: _____

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FARC – P.O. Box 783, Fresno CA 93712-0783

Inside this issue

V.E. Corner

Field Day Update

“Wired for Sound”—The differences in
Coax Types