



The Circle City Communicator

February 1993

Volume IX

Issue No. 2

President's Soap Box

As the new president of CNARC I wish one and all a Happy and Prosperous New Year. I feel that I have an excellent Board, and with the support of the Club Members we will be able to get the job done. I see no great changes in the immediate future, however there are several issues that the previous Board was unable to complete relative to a more orderly transfer from one Board to the next. I feel it should be the first order of business.

In a general way, the agenda will be to continue with the Novice and Tech Classes, establish a viable Elmer program, get the treasury solvent, equip the Senior Center station, and above all, enjoy the hobby of Amateur Radio.

I wish to give my personal thanks to Mark, N6MWH, the outgoing President for his assistance at the Board Meeting.

In an effort to increase the Club treasury, we will, in addition to other drawings, hold a 50/50 raffle at our February meeting. Also, if you will bring your aluminum beverage cans, I will take them to a recycling center on behalf of the club.

73's de Dick, N6XUC

CNARC Meeting February Presentation

Topic: The Establishment and Operation
Of An Amateur Radio Repeater

Date/Time: 7:30 pm Monday
February 1, 1993

Speaker: Rob Sorenson, KB6ONO

Speaker Biography: Technician Class
Amateur Radio Operator for 14 years.
Corona resident. Works as Technical
Services Representative for Noritsu
Corporation. Active in Riverside and
Orange County Red Cross amateur radio
support. Principal architect in the
design and construction of the KB6JVA
224.700 Mhz repeater located in Corona.

Tentative Presentation Outline:

- * Brief overview of repeater operation fundamentals.
- * Frequency selection and coordination.
- * Repeater station equipment and firmware availability, selection and cost.
- * Description of KB6JVA repeater construction and operational characteristics.
- * Questions and Answer Session.

There will be a 50/50 drawing in addition to two drawings for lotto quick picks. See ya' there!

Record Attendance At CNARC Breakfast

by John Miller, NF6Y

NYAN - and I'm not LYAN, that's right, nine hams showed up at Hunnys restaurant for breakfast on 6 January 1993! See, it's a growing event and YOU oughta be there too. Early risers were Rudy - KC6GTI, John - NF6Y, Dick - N6XUC, Norm - KN6CV, ACE - KC6VUY, Tim - KD6QEZ, Mike - KC6TWR, Fred - W6TKV, and Richard - KC6YYJ.

Of course we talked about ham radio and Mike brought a show-and-tell item of great interest. It was a Army surplus HF antenna made by Hughes Aircraft and covered from 3.5 to 18 MHz. A base loaded antenna, it was segmented and folded, much as a blind person's cane, to about 18 inches. And, yes, the rain was upon us. Dick announced that the CNARC Board meeting would be at the Grinder next time as that will be more centrally located for the new board. Also covered in various depths: CD hamlist, possibility of coffee and goodies at the club meeting, leaky roofs and poor drainage, packet classes, badges, and, whistfully the lottery. The next breakfast will be February 3.

October No-Code Tech Class Received Licenses

by John Miller, NF6Y

Finally, after nine and a half weeks, seventeen new hams received their FCC licenses. As expected, they were assigned pretty much in alphabetical order. All received KD6Q--:

KD6QES	Morris Aborne
KD6QET	Samuel Aborne
KD6QEU	James Barros
KD6QEV	James Bees
KD6QEW	Jack Bobbitt
KD6QEX	Donna Ceglar
KD6QEY	Arturo Davalos
KD6QEZ	Tim Deiro
KD6QFA	Marcie Fitzwater
KD6QCN	Virginia Fuller
KD6QCO	Dan Johnson
KD6QCP	Paul Marlow
KD6QCQ	Jesse McFadden
KD6QCR	Frannel Peteros
KD6QCS	Gary Schiszler
KD6QCT	Ron Schiszler
KD6QCU	Bill Tice

Congratulations to all of you and welcome to the fascinating world of Ham radio!!!!

Another No-Code Technician Class began Saturday, January 16th. It is

being held over three Saturdays, the 16th, 23rd, and the 30th. Twenty-three students are participating in this class. The class is being taught by Mike, KC6TWR and Gerhard, WA6BHR.

Corona/Norco Amateur Radio Club

ARRL Affiliated Club #2108

P.O. Box 1873

Corona, California 91718

Board of Directors

President	Dick Moll, N6XUC	371-0555
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DIGITAL DIGEST

by Mike Frasier, KC6TWR

Welcome to the first installment of the Digital Digest. While this part of the newsletter will be mostly about "packet radio", I will also discuss some of the other digital communication modes used in amateur radio; RTTY, AMTOR, and PACTOR. Hence the name Digital Digest. I am going to keep most of the information simple to understand, for those who are new to amateur radio and to digital communications, as well as cover some new material for the more "experienced" HAM. The ideas for this column have come a variety of sources. If you are interested in reading more about digital communications, I would recommend the book "Your Gateway to Packet Radio" by Stan Horzempa, W1LOU. I have also drawn on the work of Larry Kenny, WB9LOZ and his "Introduction to Packet" series that was sent via the packet network to all US stations. First of all, what are these forms of communications called "digital"?

Digital means numeric, and more specifically it means communication via computer. When we use digital communications in amateur radio, it requires the use of a computer, a "translation" box, and a radio. Information is entered into the computer, translated to audio by the "translator" box, and sent to another station by the radio. At the receiving end the process is reversed. But it gets a little more complicated than that. Computers can only think with two numbers, 1 and 0. So all the keys on the keyboard have to be translated into a combination of 1 and 0 codes (called binary by computer types). For example, the letter "A" has a digital code of 65 which the computer changes to 01000001 (the 0 and 1 code is ALWAYS 8 digits long). This code is transmitted over the radio by the use of two tones. One tone for a 0 and another for a 1. The receiving radio system hears the tones and (Cont'd next column.)

(Cont'd from previous column)

receives 01000001 which is translated to a 65 and then to an "A" on the computer screen. Sounds simple right? In all of the digital communications modes this is the technique that is used.

Next month I'll talk about the equipment and software you will need to get started in digital communications and start our discussion about "packet radio. What it is, and how to get started.

CNARC ARRL AWARDS MANAGER


Fred, W6TKV, is the ARRL Awards Manager for the WAS (Worked All States), the 5-Band WAS and the VUCC (Working 100 Grid Squares on VHF) awards. The ARRL requires that you have confirming QSL's for each of these awards, and the local Awards Manager can sign off on your QSL cards, thereby making it unnecessary for you to send them to ARRL HQ in Newington, CT.

Senator Megahertz says:

Have you been hearing strange voices? Don't panic. It may be a new DX country.

NR6S

From "World Radio", February 1993



ZAP PRINTING & GRAPHICS

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(909) 734-8181

Lincoln Ave. & Bradford • One Block North of Cask 'N Cleaver

A Bolt From The Blue Can Ruin Your Day.... And A Lot More

by Art Sutorus, KC6YRH
Technical Specialist
Orange Section
ARRL Southwestern Division

Although the occurrence of lightning in the Southern California area is much less than in other parts of the US, it does happen here. Lightning can pose a serious problem for the Amateur Radio Operator who has not taken precautions to protect his or her equipment from its effects.

Ham radio, personal computers and packet radio equipment can be damaged not only by direct lightning strikes, fortunately a low probability, but the more likely induced electromagnetic effects of nearby lightning discharges. Lightning discharges of up to 150 Kamps can electromagnetically couple damaging voltages in commercial power lines, computer interconnections, antennas and antenna rotator cables. Radiated electric field strengths of 2-3 volts/meter for lightning strikes 10 km away have been noted. Closer lightning strikes can produce field strengths in excess of 100 volts/meter. In simple terms, this can translate into voltages of up to several hundred volts being induced in nearby wires, cables and transmission lines. Electrical and electronic equipment not properly protected can be seriously damaged.

Now that you have heard the bad news, you will be happy to note that with a minimum amount of preparation, your ham equipment can be relatively secure from these potential problems. The first step you should take is to ensure that your antenna and associated electronic equipment have a low impedance (resistance) path to an earth ground. Ideally, a copper rod driven 4-8 feet into the ground near your ham shack should be made. A AWG #8
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stranded copper wire (solid wire is better, but not as practical) should be routed between the ground rod to the antenna metallic base (not the electrically driven or reflecting elements). Metal radiator hose clamps can be used to attach each end of the ground wire.

Other measures which can be taken include installation of coax transmission line lightning arrestors, such as the Cushcraft LAC series or Blitz Bug, between your radio and antenna. In addition, your ham equipment should be connected to your electrical power source through a voltage transient suppressor, such as a Transzorb or Metal-Oxide Varistor (MOV) circuit. These devices are commonly found in the surge protected power strip outlets available at most department or electronic stores.

Much more could be said about this subject but space doesn't allow. The basic steps to protect your ham equipment are outlined above. More information and details can be found in the ARRL Handbook for Radio Amateurs 1992, Chapter 36, pp 36-6 to 36-8.

Take the time to look into this subject and check your ham system to see if it is adequately protected...it could save your day!

A & M Computer Services

Norm Musselman KN6CV
1610 Pacific Avenue (714) 734-8835
Norco, Ca. 91760

- *Small Business Computer Applications
- *Personal Computer Applications
- *Sales & Repair

It's Renewal Time

Don't forget to renew your membership in CNARC for 1993 if you've not already done so. Dues are \$10 per individual or \$15 for a family. For an additional \$5.00, you can also order your badge at the same time. All you have to do is complete the application below and bring it to the February meeting or mail it to:

Corona Norco Amateur Radio Club
P.O. Box 1783
Corona, California 91718

Ham Radio Outlet

Jim Rafferty 933 N. Euclid St.
Vice-President Anaheim, CA 92801
Nat'l Sales Mgr. (714) 533-7373
N6RJ/ZRF2JR 1-800-854-6046

You're a Real Ham When....

- * You shudder at a thunderstorm, wondering what is happening to your antennas at home.
- * You send out more QSL cards than Christmas cards.
- * You use your HT more than your telephone.
- * You answer with your callsign when you pick up the telephone.
- * The thing you don't leave home without is a repeater directory.
- * When you go on the roof, it's to fix antennas, not to clean rain gutters.

from ARNS Bulletin January '93. Originally from November '92 IBM ARC Newsletter 'WB4QNX'-N4PYB Editor

Corona/Norco Amateur Radio Club P.O. Box 1783, Corona, CA 91718
MEMBERSHIP APPLICATION.....Dues: Individual \$10.00 Family \$15.00

CALL: _____ CLASS: _____

NAME: _____ BIRTHDAY: _____
(Month/Day)

ADDRESS: _____

CITY/STATE: _____

PHONE: HOME: _____ BUSINESS: _____
CLUB BADGES: (\$5.00 ea) If you want one, name on badge? _____

LIST ANY HAM RADIO ORGANIZATIONS IN WHICH YOU HOLD MEMBERSHIP:
_____ ARRL _____ RACES _____ ARES _____ OTHER

Areas for Ham interest, operation bands, etc.: _____

Signed: _____ Date: _____

Send: _____ ARRL Application _____ RACES Application Rec'd: \$ _____
Cert. Date _____ Roster Updated: _____ Badge Ordered _____

CALENDAR OF EVENTS

Monday, Feb. 1, 1993, 7:30 pm	General Club Meeting St. John's Episcopal Church 526 Magnolia Avenue, Corona
Wednesday, Feb. 3, 1993, 8:00 am	Monthly CNARC Breakfast Location to be announced. Check-in on local frequency.
Tuesday, Feb. 9, 1993, 7:00 pm	Board Meeting Grinder's Restaurant South Main Street, Corona
Saturday, Feb. 20, 1993, 10:00 am	Monthly T-Hunt Check-in on local frequency.
Monday Night Nets, 8:00 pm	Weekly except the first Monday of the month. Check-in on local frequency.
Thursdays, 11:30 am	Thursday Lunch Bunch Grinders Restaurant

Corona Norco Amateur Radio Club

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