

# DXer

N O R T H E R N  
C A L I F O R N I A  
D X C L U B



## Uganda Ham Licenses Soon?

by Paul Rubinfeld, WF5T (from a letter to NCDXF submitted by Eric, W6DU)

I spent September working as a volunteer at the Mulago Hospital in Kampala. While there, I met officials of the Uganda Post and Telecommunications Corporation, who were cordial and interested in ham radio. They subsequently met with the UPTC Board, who approved a resolution favoring the reintroduction of amateur radio in Uganda.

By the time I left Uganda, the telecommunications minister's approval was pending, but a law must be written and passed by their parliament, the National Resistance Council. If and when that happens, amateur radio will be legal in Uganda for the first time since Idi Amin banned it in 1979.

Uganda has been at peace since 1986, when the National Resistance Movement, led by Y.K. Museveni, took power. The NRM government has yet to hold national elections, but has maintained a broad-based cabinet incorporating other political groups. Unlike the Amin government, NRM does not overtly favor any one of Uganda's more than thirty tribes. Such favoritism has in the past led to the civil wars that destroyed the country's infrastructure between 1971 and 1986.

The military police appear well disciplined. The atrocities common under previous regimes are no longer occurring and, despite the non-democratic government, the press frequently prints criticism of the government.

Lacking industry and foreign exchange, Uganda is trying to develop tourism. The UPTC officials told me they plan to approach amateur radio from a tourism viewpoint. They seem to have little interest in getting privileges for Ugandans. They said their efforts to legalize amateur radio would be enhanced by letters from foreigners who would go there if licenses were obtainable.

continued on page 11

## Modem Insecurity

by N8ECW

If you use a modem, you are monitored. Every time you fire up a modem, you activate automatic monitoring equipment.

I work for large telephone networks that routinely monitor modem and fax transmissions. They view whatever is transmitted—even encrypted data.

Your government allows this under the heading "Maintenance Monitoring" in the FCC rules. Monitoring can continue for six months without legal procedures. The rules are part of an obscure pre-WWII action by

the FCC's predecessor agency, saying, "No information may be encoded or transmitted over public or private forms of telephony or radio with the exception of [government] agencies involved in national security ... With the exception of [Morse code], any communication that is not interpretable by the human ear is forbidden ..."

The monitored information goes to three database facilities: one in Brussels, Belgium; one in Malaysia; and one in Boulder, Colorado. The databases are

continued on page 11

## Inside

Meeting Minutes	2
Roster Changes	2
Treasurer's Report	3
New Yugo Prefixes—YU3FK	3
A Christmas Story—N6AW	4
Archipelago—UA3WFM	5
NASA's New SETI Program	6
Automatic Filters—WB2VVV	6
The DX Lottona 500—AF6S	7
FCC Test Car—W3SYT	8
Great Radio Lies—KZ1Z	8
Ham Satellites—VE3IDJ	9
Dear Elmer—ex-W7VJT	10
2-m Simplexes—W6SXX	11

## Coming Soon:

- Livermore Swap Meet: 1st Sunday of month, 7 A.M. to noon. Contact N7TVE.
- Winterfest '93: January 16 at Monterey Peninsula College Armory, 8 A.M. to 1 P.M. Ham demonstrations and flea market. Contact Doug, KC3RL at 408/663-6117.
- International DX Convention, April 16-18 at the Visalia Holiday Inn. Contact K6ITL.



## Christmas Party

The club gala at the Bold Knight in Sunnyvale on the 11th will be the December meeting. Reserve your place by sending a check for \$25/person to Craig, N6ITW. Attitude adjustment begins at 6:30, dinner at 7:30. See page 4 of your November DXer for the program, door prizes, and entree choices.

**N O R T H E R N  
C A L I F O R N I A  
D X C L U B**

**Club Officers:**

President: Bob Artigo, KN6J  
 Vice President: George Allan, WA6O  
 Secretary: Garry Shapiro, NI6T  
 Treasurer: Melissa Thomas, AA6TD  
 Director: Dewey Churchill, KG6AM  
 Director: Ralph Hunt, AG6Q  
 Director: Bill Fontes, W6TEX

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 2520 Heather Lane  
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 (or via DXPSN)

Membership Data: John Cronin Jr., K6LLK

**Club Repeater, W6TI/R, (147.36+)**

Trustee: Bob Vallio, W6RGG  
 Comm. Chairman: Ralph Hunt, AG6Q  
 Club simplex: 147.54 (suggested)  
 Thuis. Net QTR: 8 p.m. local time.  
 Net Manager: Ralph Hunt, AG6Q  
 DX News: Dave Pugatch, KI6WF  
 Propagation: Al Lotze, W6RQ  
 Contest News: Rich Hudgins, WX6M  
 Westlink: Craig Smith, N6ITW  
 Swap Shop: Ben Deovlet, W6FDU  
 933 Robin Lane  
 Campbell, CA, 95008  
 408-374-0372

QSL Information: Mac McHenry, W6BSY

**W6TI DX Bulletins:**

W6TI Station Trustee Bob Vallio, W6RGG, transmits DX information at 2:00 zulu every Monday (Sunday evening local time) on both 7.016 and 14.002 MHz.

**Club address:** Box 608  
 Menlo Park, CA  
 94026-0608

The DXer is published Monthly by the Northern California DX Club and sent to all club members.

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## *Board of Directors Meeting*

The Board Meeting was held November 13. KN6J, WA6O, KG6AM, NI6T, AA6TD, and AG6Q were present and Bob, KN6J presided.

- Christmas Party: WA6O moved to allocate up to \$1000 for three drawing prizes—2 HTs and a guest gift—and his motion passed.
- DXer of the Year. With W6CF unable to be involved as planned, the “wish list” for changes needs simplification. Hal, N6AN will draft a proposal based on the W6FAH Committee report and BOD discussions, with these guidelines:
  - a. No secret committees
  - b. Consideration of candidates’ activities for past 24 months only
  - c. Equal weighting of selection criteria
- Louese Bloom’s application for Life Membership was approved.
- AA6TD will establish a July-maturity CD with Life Member revenue from which Life Members’ annual dues can be extracted.

## *General Meeting*

The General Meeting was held November 13 at Harry’s Hoffbrau in Palo Alto. George, WA6O presided.

- John Portune, AA6NG gave an informative talk on charging and discharging of nickel-cadmium batteries.
- Dick, WB6WKM presented Summer Marathon plaques to those winners present. He said he would bring the unclaimed plaques to the Christmas Party.
- Brad, K6WR summarized news on the legislative front. The Spectrum Protection Bill (SB73) died when Congress adjourned. Rep. Cooper (TN) decided not to bring it to a vote on the floor; the bill had a record number of co-sponsors, but the timing was inauspicious. ARRL will decide whether to re-introduce it in the next session. The Radio Spectrum Auction Bill (SB218) died ingloriously.
- Jim, W6CF reported on DXAC doings. He still has no word on Yugoslav countries or on Baldur’s (DJ6SI) Glorioso operation.

## *Roster Changes*

**New Members:**

Eric Aubery, N6WFK (Extra)  
 308 Sequoia  
 Redwood City, CA 94061  
 H: 415/367-9848  
 W: 415/323-3111

Robert Sohl WA6BYA (General)  
 1101 Martin Road  
 Santa Cruz, CA 95060  
 H: 408/423-2907  
 B: 408/423-0908

**New Phone Number:**

W6TC work phone: 415/233-0429

**Change of Address:**

David A. Stamm, AA6PG  
 211 Brook Road  
 Auburn, CA 95603

Stephen R. Salmon, AA6LF  
 909 Marina Village Parkway  
 Alameda, CA 94501

**Left out of roster (Write it in):**

Walter E. “Walt” Miller, AJ6T  
 15201 Sobey Road  
 Saratoga, CA 95070  
 H: 408/354-5828  
 W: 415/604-6487

## Slovenija Prefixes Change

by Iztok, YU3FK (S53FK?)

The new prefix S5 replaces YU3 in Slovenija, effective 24 October 1992. Old calls with a one-letter suffix like YT3A will be discontinued. Single-letter-suffix calls like S53A will be issued on a temporary basis only.

Two-letter-suffix calls, for personal stations with full HF privileges, will be changed as follows:

YU3AA-YU3ZZ → S51AA-S51ZZ  
 YT3AA-YT3ZZ → S52AA-S52ZZ  
 YZ3AA-YZ3ZZ → S53AA-S53ZZ  
 4N3AA-4N3ZZ → S54AA-S54ZZ  
 Full HF licenses: S55AA-S55ZZ

Any licensed amateur not satisfied with this system can request a different call in the S51AA-S59ZZ range, so YU3FK expects to be S53FK, not S51FK.

Three-letter-suffix calls will be assigned as follows:

Repeaters, beacons, and packet nodes:  
 S55AAA-S51ZZZ  
 UHF/VHF only: S56AAA-S56ZZZ  
 HF Novice licenses: S57AAA-S57ZZZ  
 Radio club licenses: S58AAA-S58ZZZ  
 Special organizations: S50AA-S50ZZ

For example, YU3ZRS—the official ZRS station—will probably be S50ZRS.

I would like to ask packet SYSOPS worldwide to adjust routing tables for Slovenija, so that mail addresses (@S5) are not lost. Exact node and BBS calls will be reported as soon as they are issued.

from the November '92 *Texas DX Society 'The Bullsheet'*—W5ASP Editor

## Murphy's Law

Hale Blakely, W9CBE

Murphy's law originated in California's Mojave Desert in 1949. Major John Paul Stapp had just risked his life on an experimental rocket sled that pushed him beyond 31 G's (accelerated with 31 times the force of gravity). He survived only to discover that none of the G-measuring instruments had operated.

Captain Edward Aloysius Murphy, Jr., a troubleshooter who was called in, found that every one of the six G-sensors had been installed backwards. He said, "If there is more than one way to do a job, and one of those ways will end in disaster, then somebody will do it that way." And that's how Murphy's law was born.

Murphy later commented, "I gave my original statement to warn people to be sure they covered all the bases, because if they didn't they'd have trouble. I never meant my statement to be fatalistic."

Regardless, Murphy's law achieved lasting popularity. It has made several people rich, but Murphy isn't one of them.

from *Greenpeace Communications Ltd. Nuclear Age*, via the November '92 *'Hamtrix'*—Les Peterson, W9YCV Editor.

## FCC May Change

### What You Can Talk About

In action on Docket 92-260, on June 18, the FCC proposed to amend rules for the Amateur Service, reducing restrictions on permissible communications. The proposal would allow greater flexibility in both public service and personal communications.

The Commission noted that many amateurs support relaxing one or more existing restrictions that were designed to

protect the non-commercial character of the Amateur Service.

While reducing some restrictions would provide better communications in the public interest, the potential exists for commercial exploitation and abuse.

from the ARRL Northwest Division *Communicator* via the October '92 *Inland Empire VHFRA 'Repeater'*—KA7CSP Editor

## Treasurer's Report

### Checking Account Activity:

September 30 EOM Balance	\$7,274.80
Receipts	129.92
Expenditures	595.13
October 31 EOM Balance	\$6,809.59

### Savings Account Activity:

Life Membership Fund:	
Eureka Bank C.D. 11/13/92	\$10,475.33
Eureka Bank 11/4/92	\$15,635.23
Repeater Fund	\$2,070.36

## Editor's Lament

by Chuck Vaughn, AA6G

Where have all the articles gone?  
 ...long time passing.

Where have all the articles gone?  
 ... long time ago.

Where have all the articles gone?  
 ... No one sends them anymore.

What will we ever do?  
 What will we ever do?

from the Summer '92 *'Prime Focus,'* newsletter of the *Tri-Valley Stargazers*, Livermore, CA—AA6G Editor

## Résumés From Hell

The following are from a collection of résumés accumulated by Accountemps, a temporary personnel provider\*.

- "Education: Curses in liberal arts, curses in computer science, curses in accounting."
- "An obsession for detail; I like to make sure I cross my i's and dot my t's."
- "Auditing for small manufacturing companies since 1877."
- "My résumé shows my critical career developments. I'm also including other important parts of me."

\*reprinted from the San Jose Mercury, which credits *Working Woman*.



# A Ham Christmas Story

by Jan David Perkins, N6AW  
[author of *Don C. Wallace, W6AM, Amateur Radio's Pioneer*]

Don Wallace adjusted the catwhisker and slide tuner—200 turns of number-22 wire wound on a Quaker Oats box. From one end a wire went out the window, up to the barn roof, to a palm tree in front of the house, and two blocks down Linden Avenue. Another wire led to a grounded water pipe.

Don recognized a throaty buzz, his friend Jim Cook, signing JC. He could recognize the characteristic sound of each of the dozen amateur stations in the Los Angeles basin. When Don answered, signing WU, his self-assigned call, the transformer groaned, the spark popped like a firecracker, and he smelled ozone.

The transmitter, its fixed spark electrodes connected to a hand-wound transformer, operated at 250-meter wavelength. Don's brass key connected directly in series between the transformer primary and the AC power mains.

Don chatted with Jim Cook for a while, then signed off. His nose told him the transformer was overheating. Made of stove-pipe laminations and copper wire, it burned out periodically, forcing Don to disassemble and rewind it.

Don and Jim, who lived just three doors away, had built receivers and learned the code together four years earlier. Jim's uncle had given Don the stove pipe for his transformer.

When Jim wanted to transmit, he borrowed a spark coil from his father's Model-T Ford. Jim had been heard six miles away, even though the spark coil imparted little energy to his antenna.

One time Jim forgot to reinstall the spark coil. His father hand-cranked that Model T until his arm was sore. He wasn't amused when he discovered the coil was missing.

Direct-keyed spark transmitters like Don's had a peculiar characteristic called "kickback." Sometimes, when the key was pressed, the cycle of the AC would be at a peak of the same polarity as at the end of the

previous character, producing a tremendous bang when the transformer core saturated. This caused a high-current pulse on the AC line. The power distribution system reacted next, making a surge in voltage that caused light bulbs to flash. Sometimes they exploded. As you might expect, this created apprehension in the neighborhood.

The signals Don heard (and his own) sounded like ignition noise in a modern receiver—a 100 Hz buzz (the line frequency in Los Angeles was 50 Hz then). The "note" had a sharp or a coarse characteristic, depending on the shape of the spark gap electrodes. Tuning and the amount of coupling to the antenna affected the sound of a spark transmitter. Each was unique.

In 1913, when Don was 15, his father, William Wallace, managed the First Exchange Bank in Long Beach. Though he could be considered well-to-do, Don's father wanted his children to appreciate the value of the dollar, so they had to earn all their spending money. That was one reason every item in Don's station was home built, right down to the hot-wire ammeter.

Don's crystal set wasn't state-of-the-art. Although the invention of the vacuum tube, the "DeForest Audion," was still a year away, the Bunnell "Loose Coupler" was available for \$15. Don's transmitter could have been better, too. The "pitch" of a fixed spark-gap "note" was too low.

The rotary gap transmitter, such as the one operated by fellow Los Angeleno Howard Seefred, 6AE, was much better. An electric motor drove a wheel with insulated electrodes. The "pitch" was set by the rate the points on the wheel passed fixed electrodes, not by the line frequency, so it could be higher—more pleasing to the ear.

Don knew all about it. He yearned for a rotary-gap transmitter, but he couldn't afford one and he didn't have access to the machine shop necessary to build one. So, in the weeks before Christmas, he made toys for his younger sister and brother, four and six. He made a train with several cars that moved on a wooden track—certain to delight his brother. The detail-work on the doll house took longer, but with football season over he had the time.

Christmas morning he awoke to the sound of the little ones racing down the stairs. He enjoyed watching them open their presents. Then he opened his—school clothes, shoes, and a football. When he had finished, his father asked him to help him wash the car.

Don noticed a faint smile on his father's face as he opened the barn door. Then he saw the crate—big, orange, with a red ribbon. That evening, a new high-pitched wireless transmitter announced its presence.

*from the Autumn '92 'QNCI'—Scott Laughlin, N7NET, Editor and Publisher (85000 Laughlin Road, Eugene, OR 97405)*

## Morsecodians at Alice Springs

by Geoff Arnold, G3GSR (from information supplied by John Houlder of Charmwood, ACT, Australia)

The Sydney Morsecodians Fraternity sponsored the annual Canberra/Alice Springs Morse telegraph circuit again this year, from April 25 to May 3. They operated from the Old Telegraph Station in Alice Springs and from the Technology Centre in Canberra.

A glance at the map shows the enormous distance involved in this latter-day landline (sounder) circuit, provided courtesy of

Telecom Australia. The Morsecodians offered free telegraph messages to the public this year, using special forms available at both locations.

Public reaction was overwhelming and unexpected, probably because the word 'free' was prominently displayed at each station. The proximity of Mother's Day may have been a factor, as many seized the opportunity to send free greetings to 'mum.'

A total of 1007 messages were handled during the week, 485 originating in Canberra and 522 in Alice Springs.

# Archipelago of Hearts

by Lyudmila Mikhailovna Fyodorova, UA3WFM

Every night, when I turn on my rig, I anticipate being alone with my thoughts—to “get the breathing” of far-off countries and to meet friends on the air. If lucky, I’ll make contact with a country new to me.

I find a clear frequency and call CQ, while I wonder who will be my first QSO. This time, Alex Malygin, UVØAB, answers. We were once neighbors and worked together on Dixon Island. Alex tells me he will provide communications for an upcoming business expedition into the high latitudes.

He also tells me his wife is vacationing in Sochi and his son Vladimir, UAØBDU, still works at the E.T. Krenkel Polar Observatory on Hase Island. He says he’ll send details in a letter and gives his “So long, 73.” I feel I’ve just taken a short trip to Dixon Island.

Next, I contact several stations in Latin America—a chance to practice my Spanish. Then here’s Paulina from New Zealand and Caroline from Canada. Bad propagation makes the last contact difficult, but friends from Leningrad help us in our talk, relaying my answers to Caroline.

I press the key, my speech is fluent;  
My mind is clear, my heart’s in flight,  
And someone’s warm and friendly hand  
Will answer me in kind.

I’ll receive confirmations of the contacts in the form of simple or very fancy “QSL cards” to hang on the wall above my rig. But more importantly, I have many friends in Russia and all over the world.

Once *Radio* (the Russian ham magazine) published a call for more YL hams. But mere calls aren’t enough. Everyone soon realized that most women have little time to spare, and spending it going to radio club meetings is an impermissible luxury. And where in Russia can one get the necessary ham equipment?

For many years I’ve practiced amateur photography and filming. Photo equipment is easier to obtain. I can find both cheap and expensive equipment in shops, and all the accessories and supplies. Even now, in these times of shortages, photography is possible.

I was lucky. I already had ham gear when I started—an old YC-9 transceiver—but as I gained experience, I began to appreciate its imperfections. Finally, with great difficulty, I managed to get a P-250 receiver. It helped me work countries I hadn’t been able to hear before and to feel more confident in the U QRQ Club “roundtables.”

Without progress, there’s degradation. So I understand why many YLs have dropped out. Were some prevented from getting on the air by their husbands?

I have dozens of letters from my male ham friends. To say they are sincere doesn’t begin

to describe them. They are letters of fate, of love, of failure, and yes, some letters of success. But all are alike in containing a line about a woman or girl of a man’s dream. Each friend, whether near or far away, dreams of having a ham wife.

He would like her to share his interest. Why? So that his ham station will be their home’s main feature! He also wants her to help their children take an interest in his hobby. My heart goes out to them. Most won’t realize their dream or even a full life.

continued on pag 6

## Lyudmila M. Fyodorova

by Alex Ulyanich, RB5IJ

The December 1983 *Radio* carried a feature story about two lady hams, Helen P. Molozhayeva and her daughter Lyudmila M. Fyodorova. What has been their fate since then? They still live in Kursk. Mrs. Molozhayeva is now a pensioner. Mrs. Fyodorova is a radio operator in the Russian Ministry of Communications, and she also writes verses and songs—which she plays on the guitar. She won first place in a regional television bard contest.

Two years ago, Lyudmila acquired a new hobby. Although a professional radio operator for many years, ham radio was new for her. When her husband, the famous polar radio operator Nikolai Fyodorova, ex-UAØBAY and now UA3WFM, came home to Kursk, Morse sounded again in their home and Lyudmila understood what was lacking in her relatively quiet life “on the continent.”

She soon attracted attention on the air with her high-class operating. Her new ham friends greet her, “Hello, Mila,” whenever they hear her callsign, UA3WFM. She puts her entire soul into her new hobby, having made more than

10,000 contacts with 180 countries and territories in two years.

She excels at everything she does—cooking, knitting, playing chess, writing verse—and she does these things with enthusiasm. She has joined the High-Speed Club (HSC) and the U QRQ Club and she’s a great mail correspondent.

Receiving not just QSLs, but photos and letters from her friends, Lyudmila assembled photo albums devoted to Arctic and ham veterans. These albums could become exhibits in the radio museum Lyudmila dreams of founding.

She hasn’t given the museum a name yet, but she has defined the concept—a place where veteran hams and younger ones can meet, a place devoted to arousing the interest of the young in ham radio.

Lyudmila and Nikolai are passing their knowledge along to their daughter Helen. So far, Helen is an SWL (UA3-135-813), but she has already mastered the Morse code, a big step along the way to becoming a third-generation member of a ham dynasty.

We asked Lyudmila to share her thoughts on problems of YL hams in the C.I.S. in our magazine (*Prometheus Amateur Association’s Press Digest*).

## BBS Time

by Koert, AFA20Q

All SYSOPs worldwide should use UTC time. The current mix of UTC and local times makes tracking forwarded messages difficult. If you agree, please suggest the idea to others, including foreign SYSOPs.

from the October '92 'USAF Mars Kentucky Newsletter'—AFA20Q Editor

## Condition

by Shirley Wolter, N6LFA

You can judge someone's condition by what he takes two at a time—pills or stair-steps.

## Not Human

by Shirley Wolter, N6LFA

Computers may not be human, but they have a few human traits—like an inclination to quit working.

from the Nov. 1980 'ARNS Bulletin'

## Archipellago

from page 5

"The ether" is a place where everyone, willy-nilly, opens their hearts, where warmth and kindness irradiate the antenna of your far-away correspondent when you hear the voice of a YL on the air. This is especially noticeable when working the high Arctic. People spend their winters for several years in the seclusion of polar stations far from their dear ones. Contacts for these people are like dates. Some of the lonely souls I've met have no families at all.

So I say to you, dear woman: become a ham. It's a world of integrity and of friendship of all the peoples and nations. I'd like to see more women on the air from all the republics, and hear much less often, "You are the first Russian YL I have worked."

Forgotten all my cares, all my chores,  
The world of kilo-Hertz is such a thrill:  
Great ether—the Archipelago of Hearts—  
One of your islands is Lyudmila.

from the Sept. '91 *Prometheus Amateur Association 'Prometheus Ham Digest'*—Alex Ulyanich, RB5IJ, Editor.

(membership in PAA is available through NA3O, 13 Glen Meadow Drive, Glen Mills, PA 19342 for \$12/year)

# New NASA SETI Program

by David Barton, AF6S

NASA will soon begin the most comprehensive search ever for evidence of intelligent life elsewhere in the galaxy. NASA will attempt to intercept radio transmissions from other planetary systems.

In the words of Dr. John Billingham of NASA's Ames Research Center in Mountain View, California, "In the first few minutes, more searching will be accomplished than in all previous efforts combined. In recent decades, scientific opinion has increasingly supported the concept that complex life may have evolved on planets orbiting other stars, and that some of them may now have culture and advanced technology."

Billingham, the program chief, said the High-Resolution Microwave Survey (HRMS) has two parts: the Targeted Search and the Sky Survey. Using the world's largest radio telescopes, the Targeted Search will analyze emissions from 1 to 3 GHz, looking for patterns that differentiate artificial signals from the randomness of natural background noise.

The Targeted Search program will "listen to" sun-type stars less than 100 light years

away, using the National Astronomy and Ionospheric Center's 1000-foot radio telescope at Arecibo, Puerto Rico. Cornell University operates the Arecibo Observatory for the National Science Foundation.

The Sky Survey will use the 34-meter antennas of NASA's Deep Space Network sites worldwide to scan both the northern and southern hemispheres over a frequency range from 1 to 10 GHz. The Sky Survey will begin at NASA's Goldstone site in southern California. The Jet Propulsion Laboratory of Pasadena, California will manage the Sky Survey element of the program.

According to Dr. Billingham, "The large areas of sky and the frequency range to be covered mean the Sky Survey must be less sensitive than the Targeted Search; a signal will have to be stronger to be detected."

Both HRMS elements will use digital signal processing systems that can analyze tens of millions of narrow-band "channels."

The HRMS is part of NASA's Toward Other Planetary Systems program in the Solar System Exploration Division, Office of Space Science and Applications.

source: NASA Release 92-161

## Automatic Audio Notch Filters

by Chris Fagas, WB2VVV

Most new transceivers have a built-in notch filter, useful for "notching out" carriers from "tuner uppers" and such. There are also aftermarket "automatic notch filters" that might seem to be superfluous.

Built-in notch filters work well, removing an offending S9 signal so you can hear a station that is only S2. One reason they work well is their location in the IF (intermediate frequency amplifier) of the receiver, ahead of the AGC detector. This allows you to read a weak signal's strength on the S-meter after you notch out a stronger one, and the strong signal doesn't "pump" the AGC or overload the last IF amplifier stage.

A audio notch filter, which must operate after the AGC detector, can't do that, so the

system is more susceptible to overload. But an *automatic* notch filter eliminates the need to "twiddle." It finds an offending carrier and null it all by itself.

I have used a Datong automatic notch filter for more than a year—on HF, VHF, and even on OSCAR, and have come to regard it as an essential piece of equipment for single sideband operation.

If you get one, just remember one thing: always turn off your automatic notch filter when you operate CW. If you don't, it will make dots of all the received dashes, making CW signals difficult to copy, to say the least.

from the February '92 *Stateline Radio Club of New York and New Jersey newsletter*—WB2VVV Editor

# The DX Lottona 500

by David M. Barton, AF6S

Bored with DX? Worked 'em all, or almost? "All dressed up and no place to go"? Join the crowd. DXing is fun when you need things, but waiting for DXpeditions to those last few rare places is a drag.

Sure, you can extend the fun by chasing Five-Band WAZ. But that won't take long, and each new award is less exciting than the last. Did you ever consider why?

It's simple: all the awards have "saturation points," limits to the number of whatever you can work for credit. So anyone who pursues DX diligently for ten years ... See what I mean?

So why not invent ageless DXing?—a "What have you done lately?" kind of game.

Here are the rules for my first attempt—called "The DX Lottona 500." Read 'em through and understand the game.

- a. The world has 500 "counters." Small DXCC countries *are* counters, but large countries are split to make more counters. The number of counters in each large country is constant—set by whoever administers the game.
- b. The national radio club of each large country determines how its own country is split (some areas may intentionally have very few or no hams—DXpedition destinations).
- c. The object is to work and confirm as many counters as possible, but ...
- d. **Kicker #1:** only 120 counters are workable for credit *at any one time*, the rarest 100 DXCC countries and twenty other counters that are periodically re-selected from the remaining 400 (called The 400) by lottery.
- e. A counter from The 400 is workable for credit (in the Workable Set) for a two-week period starting on a Wednesday at 0000 Zulu (Every Workable Period includes two full weekends).

f. Each Workable Set is chosen two months before its Active Period, allowing time for DXpeditions—barely.

g. **Kicker #2:** All countries containing more than one counter must "re-split" every two years. Though the number of counters in each large country stays constant, the boundaries between counters change. National ham clubs can set their boundaries whimsically, if they wish. France might divide according to wine-growing regions, for example. The only requirement is that the counters must be contiguous and boundaries must lie either along latitude and longitude lines or along natural features such as rivers, continental divides, etc. (so participants can figure out exactly where the boundaries are).

h. **Kicker #3:** After each large country re-split, contacts with old counters in that country no longer count toward the Lottona 500 total. Yes, every player *needs all* the new counters. Large country re-split times are staggered so no more than one occurs in any month.

i. **Kicker #4:** Lottona 500 submissions are made on *computer media*, (to eliminate manual data entry). You send in your log, on disk or via modem. DXpedition logs are submitted the same way.

Computers compare your data with that of all the other logs (including those from DXpeditions), total your score, update your standing, and advise you by SASDM (self-addressed, stamped disk mailer) or by BBS or packet. *QSL cards are not accepted.*

j. Logging software certified for use in Lottona 500 must produce submission files in Lottona Standard Format (whatever that is).

k. **Kicker #5:** The QSO "exchange" is 3-character code generated by a certified logging program. Lottona headquarters

computers will compare the exchanged numbers to check contact validity.

l. **Kicker #6:** The certified logging programs generate the 3-character exchange codes by convolving randomly assigned numeric keys with the user's callsign, allowing Lottona computers to identify any station that has ever submitted a log, or who uses any certified logging program, just from a series of the exchange codes given. Thus, pirates will expose themselves as soon as they give a few exchanges. Any who use a certified logging program can be identified at headquarters by log data *others* submit.

## Implications and Advantages

1. Everyone gets a "day in the sun." Even a W6 or a DL will be in demand occasionally.
2. No one is likely to "get 'em all." But if someone does, he can't rest on his laurels. To stay near the top, you have to stay active.
3. QSL bureaus, QSL managers, and postal costs are eliminated, except for the mailing of a disk—and even that can be avoided. One result: a contest operation or DXpedition won't be flooded with QSLs unless their destination is a rare DXCC country. If, seeing the example, the DXCC program converts to electronic verification, QSLing could be eliminated altogether, except among those who want to exchange cards for sentimental reasons.
4. The world of Lottona 500 DX will be ever-changing. When there is propagation somewhere, you'll hear counters you need.
5. Instead of displaying your standing with a plaque and stickers, you will use a chart. You'll plot wiggly lines,

continued on page 10

# FCC Test Car in New Museum

by Bob Rockwell, W3SYT

The Federal Communications Commission will soon open a museum at its former Central Monitoring Facility at Grand Island, Nebraska. The museum will display several hundred radio transmitters and receivers, photos, equipment manuals, and books.

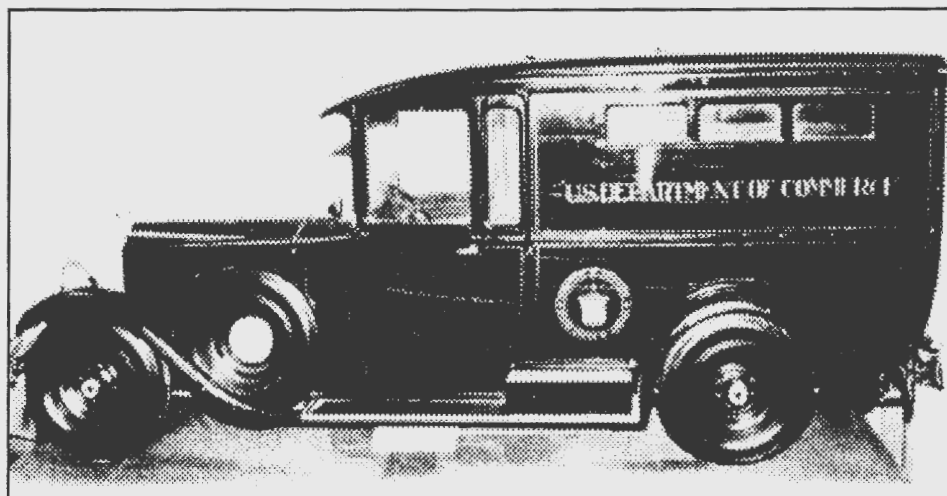
The building itself is in the National Registry of Historic Buildings. One of the prime exhibits is a 51-inch model of the FCC's first field car.

## FCC Field Cars

In 1910, the United States enacted its first radio laws, which required licensing of ship and shore radio transmitters, examination of radio operators, and the inspection of transmitters. It became necessary to organize a radio inspection and enforcement service.

The advent of radio broadcasting increased the workload and the variety of tests needed, precluding hand-carrying all the equipment. A special automobile was the answer.

The first car made to FCC's specifications began service in 1925. Built by Packard Motor Car Company, it had a heavy-duty chassis, special wheels, a spring suspension—all necessary to support an oversized gas tank and the radio equipment. Packard delivered ten vehicles, sans bodies. The FCC built the body almost entirely of non-



metallic materials to avoid affecting operation of the radio equipment.

The car had a desk across the front of the radio compartment with monitoring and field-strength equipment mounted on it. On the right, a radio frequency oscillator provided accurate calibration signals from 20,000 meters down to ten meters (15 KHz to 30 MHz).

Storage batteries under the car's floorboards powered the gear. Other equipment inside the vehicle included a crystal oscillator, also used for calibration, a variety of wavemeters and omnigraphs, a field intensity test set supplied by Western Electric, a complete radio direction finder

with loop antennas, and a five-Watt transmitter for emergency communications.

A typewriter and two dome lights made the car a mobile office, where measurements or operator examinations could be performed day or night.

The car normally carried a crew of two, one man driving and one operating the equipment in back. The two-man crew arrangement also meant one could drive while the other slept, for extended time and distance coverage.

*from the August '92 Steel City ARC (Carnegie, PA) 'Kilo-Watt Harmonics.'*  
Material for the article was submitted by Rebecca R. William of the FCC)

# Great Radio Lies

by Pete Kemp, KZ1Z

- I'm from the FCC and I'm here to help.
- I never run excessive power.
- I fixed it right the first time. It must have failed for some other reason.
- You're 5 by 9. Please repeat my report.
- We shipped your new linear yesterday.
- All you have to do is follow the manual.
- No need to look it up; I've got it memorized.
- It's a quick job; we'll be home for lunch.
- I thought you brought the connectors!

- I QSL 100 percent.
- Sure you can test the high voltage. Just grab the wire fast, with one hand.
- You can't hurt it. Just tune up and look for smoke.
- It must be the repeater; my station is fine.
- You sound distorted, too. What's an up-5 switch.
- I never use a DX packet spotting network.
- I don't work DX on list operations.

*from the October '92 'USAF Mars Kentucky Newsletter'—AFA2OQ Editor*

# ARRL BBS Expands

The ARRL's computer bulletin board system has expanded to five lines with support for modem speeds to 14.4 kb. The League's new BBS number is 203/666-0578 (14.4/9600/2400/1200, 8-N-1). The system runs Wildcat BBS software on a Gateway 486 50 MHz computer. The Sysop is Luck Hurder, KY1T. Luck is ARRL Field Services Department Assistant Manager.

*from the October '92 'Magnolia Report'—N5JXP Publisher and K5QNE Editor*



# Amateur Satellite Radio

by Bob Mitchell, VE3IDJ

## The Past

The space age dawned when the U.S.S.R. launched Sputnik-1 on October 4, 1957, just a quarter century ago. I remember watching it cross the evening sky from my then-home in Northern Ireland.

Amateurs and others worldwide tracked Sputnik-1, listening to its beep-beep-beep as it crossed overhead. The Russians had set the orbiter's beacon frequencies at 20.005 and 40.010 MHz, knowing Amateurs would hear it and provide worldwide tracking and much publicity. The only instrument aboard was the beeper; a thermistor and circuitry made the beep rate tell the internal temperature.

Explorer-1, the first U.S. satellite (launched January 31, 1958), measured radiation levels.

The first OSCAR (Orbiting Satellite Carrying Amateur Radio) was lofted into orbit just four years later (December 12, 1961). OSCAR-1 weighed ten pounds and its beacon transmitter emitted 140 milli-Watts on 145 MHz. The Oscar program continued until June 15, 1988, when OSCAR-13 went up. That multi-mode Oscar, in its high elliptical orbit, is still operating today.

Numerous other Amateur satellites have been orbited since OSCAR-13, the latest a Korean one launched in September of '92.

## The Present

Several low-orbit Amateur satellites, called "microsats," are aloft. Completing each orbit

in about 90 minutes, these "birds" appear over most places on earth three times per day. They provide voice, digital, and even video modes.

The most widely used satellite for voice, CW, RTTY, SSTV, and packet is still OSCAR-13. It provides global communications on VHF, UHF, and SHF frequencies. OSCAR-13 operates in several modes—combinations of uplink and downlink frequencies—which can be programmed by controlling ground stations.

"Mode B," the most popular setup, uses 435 MHz for uplink and 145 MHz for downlink. Voice transmission is by SSB.

To use OSCAR-13 in mode B, you need a dual-band transceiver (2 meters and 70 cm) or appropriate transverters and transmitter output of at least 25 Watts. All major manufacturers make suitable rigs. You may need a low-noise receiving preamplifier—preferably mounted at the antenna—as well.

Antennas must be circularly polarized—a crossed-yagi, for example. Hy-Gain, Cushcraft, and KLM all make satellite antennas. You will need two; one for two meters and one for 70 cm, mounted on the same cross-boom, so they rotate together. You need both elevation and azimuth rotators to track the satellite's direction across the sky. Use low-loss coax, such as Belden 9913, and make the run as short as possible.

You also need a "real-time" way of locating the satellite in the sky. Paper charts and plots work fine, but a computer program is easier.

When you are ready, wait for a pass, aim your antenna, and tune for a CQ or call CQ yourself. Satellite operation is neat; you are always operating "full duplex," so you can hear your own signal and others, while you are sending. It takes getting used to. After calling CQ, listen where you heard your own signal. That frequency won't be constant—doppler shift moves it slowly as the satellite goes over, like the whistle of a passing train.

How far can you work on OSCAR-13? Nearly halfway around the globe. Range is greatest when the satellite is at its highest orbital point, the apogee. You can certainly work DXCC by satellite; many have.

To listen in on Amateur satellite transmissions, just monitor 145.825 in FM mode, with your packet TNC hooked up to the 2-meter rig. DOVE transmits telemetry data there, and you will copy rows and columns of numbers and letters whenever it passes overhead. Decoding software for DOVE data format is available.

I hope I've whetted your appetite. Why not try Amateur satellite operation? It's fun.

## For more information:

*The Satellite Experimenter's Handbook*, published by ARRL and CRRL, covers all aspects of satellite operation and equipment.

There are also regular satellite columns in *73 Amateur Radio Today* and *QST*.

*Satellite for Beginners* and *Pacsats Made Easy* are both good sources. They are published by the Amateur Radio Satellite Corporation. You may wish to join that organization for its bimonthly bulletin.

from *Amateur Radio NorthWest—Edited and Published by VE3IDJ*

## Morsecodians at Alice Springs from page 4

John Holder, speaking for the Morsecodians, reports: "We blew our postal allowance in the first three days. Fortunately, everyone saw the value of the exercise, so the postal budget became rather elastic!"

"I opened the line at Canberra early Saturday, May 2—the morning after the opening night at Alice Springs, when the Old Telegraph Station had a barbecue and Morse operators dressed in period costumes.

"After I exchanged pleasantries on the line, I learned that Alice Springs had 130 messages for Canberra. This would have been a fairly daunting backlog in the old days but we took it in turns and finished by 11:30 A.M.—except for the new messages that banked up Saturday morning.

"The operation coincided with Australia's National Heritage Week, with this year's theme being Australian WWII history. It may not be widely known among MM readers that Darwin was the target of about 70 raids by the Japanese Imperial Air Force,

over a period of eighteen months beginning in February 1942.

"It being fifty years after those events, Morsecodian Reg Moger transmitted all the press stories on the 1942 bombings over the line to Alice Springs.

"The stories were displayed on notice board at the Alice Springs station. It was our most successful year yet."

from the *Summer '92 issue* of *'Morsum Magnificat'*, published by G.C. Arnold, G3GSR, 9 Wetherby Close, Broadstone, Dorset BH18 8JB, England. Annual U.S. Subscriptions are \$18 (cash only).

## Dear Elmer

by Elmer Quirk, ex-W7VJT, -WB6ZHH

Dear Elmer:

I'm a new ham. Last night I went to my first local ham club meeting—the Southern Nevada Amateur Radio League (SNARL).

The folks were friendly, but I couldn't understand their lingo—the names of the bands, for instance. I overheard one old fellow say, "I got that ZK2 on 12, 17, and 30 meters."

Another guy expounded on his new QRP rig for 14 Mega-Hertz. When I asked whether he ever worked 20 meters, he stared at me for a moment, then said, "20 meters is 14 MHz..." I think he throttled the word "dummy" in his throat.

Later, someone suggested to his friend, "Let's meet for lunch tomorrow; call me about 11:45 on 2 meters."

"Okay, on the 147.99 machine" was the reply.

Back home, I pulled my *ARRL Handbook* off the shelf and looked up the formula for converting from meters to Mega-Hertz. It says you divide the meters number into 300 to get MHz and vice-versa. But dividing 300 by 14 MHz gives 21.4 meters, not 20, and dividing 300 by 2 meters gives 150 MHz. What gives?

—Confused in the desert

Dear Confused:

It all dates from lecher wires. Early hams measured wavelength with 'em, but a shortage of lechers during the Great

Depression led to other methods. Lecher wires became obsolete.

Wavemeters served for a while. RF voyeurs built their own from designs published in Hamboy magazine. Others bought factory-made models.


Then factory-made radios came on the scene. Their dials were marked in kilocycles, not meters, causing a lot of head-scratching at first. BC-221 frequency meters, developed during World War II, were also calibrated in kilocycles.

They were cheap later and hams, ever in search of a bargain, snapped them up.

Soon almost all hams and electronics professionals understood cycles, kilocycles, and megacycles. But instrument marketeers wanted to make sure the buyer was awake out there. "Buyer beware" is fine, but "buyers asleep" would ruin many a company. That's why the next triumph of measurement technology, the digital frequency counter, read in Hertz, Kilo-Hertz, and Mega-Hertz, not cycles, etc.

So yes, you can convert from meters to Mega-Hertz. The simple formula from the *Handbook* is correct—but it misses the point about those band names.

In the years since the lecher wire, the incessant drum-roll of technology has moved us forward. In the old days, measuring to the nearest meter was pushing back science's ... uh, well, it was an accomplishment.

The old timers named the bands as best they could, rounding off to the nearest 5 meters. It was "good enough for government work," as they might have said. And the names have stuck. 


## Lottona 500

from page 7

like stock quotations, showing your standing against published averages for your counter, your country, and the world.

- DX packet networks could provide up-to-date Lottona info—the current and upcoming list of Workable Counters, details of large-country re-splits, and the standings of players. In sheer statistics, DX Lottona 500 could beggar baseball!

Want to Play? Me too! Now here's "the rest of the story." Lottona 500 began as an attempt at writing humor. But it backfired. What I intended to be outrageous isn't. Lottona 500 began to make sense, to take on a life of its own.

With a little polish, a little experimenting with the rules, Lottona 500 could turn into a DX game more fun than any now available. Let me know whether you think I've been sniffing too much California air. If not, the question is: Who will run this thing? 

## The Real Cost

by WD9IBJ

Hams married to non-hams have a special problem—how to get newly acquired gear into the house without the spouse knowing about it. Or if the spouse discovers the item, how to come up with an acceptable cost.

Just making up a cost at random doesn't work; you won't be able to come up with the same number a second time. Here's a way to avoid that difficulty.

Multiply the actual cost by ten, then take the square root. For example, I bought a 2-meter handheld for \$360, including shipping. When my wife asked how much I paid for it, I used the formula and came up with \$60 (the square root of 3600).

The following week she and I attended the Peoria Superfest. In the afternoon of the second day, my wife had to leave, so I agreed to hitch a ride home later with a friend. She took the handheld, since its batteries were flat and I was tired of carrying it.

When I got home, she met me at the door saying, "Have I got good news! I made forty dollars this afternoon."

"Great," I answered. "Legally, I hope."

"It sure was. On my way out, walking through the flea market area, I offered some guy your handheld for \$100 and he snapped it up. Buying frenzy, I guess."

She smiled and continued, "I could have sold your \$412 car for \$1000, but I ran out of time."

from the January '91 Ham News Outlet via the October '92 Butler County (PA) ARA 'BCARA Tell-a-Ham—W3DMB Editor

## FCC Hits Jammer

James L. Brantley, K6KPS, received a Notice of Apparent Liability (NAL) for \$8,000 on July 3, 1992.

Brantley was charged with "emitting repetitive transmissions consisting of CQ calls and other calls that weren't intended to establish communications. These one-way transmissions were apparently intended to cause, and did cause, interference ..." the FCC said.

from the Aug. '92 ARRL Letter

## Everyone Knows That!

by George Uebele, WW7E

Roger Carl's article (right) prompted me to search ARRL publications for the National Simplex Calling Frequencies.

I finally gave up and called Jay Mabey, NUØX, editor of the Repeater Directory, at ARRL headquarters. His first answer as to why the National Simplex Frequencies aren't listed anywhere was, "Well, everybody knows that!"

I asked, "How, if the frequencies aren't listed anywhere?" At last he understood the problem and said he would try to include a listing in the next issue of the Directory or in some other League publication. (It should be in the Handbook, the ARRL operators' guide, and in every issue of the Repeater Directory—obviously—ed.)

from the Sierra Intermountain Emergency Radio Association's October '92 'SIERA'—Dorothy Uebele, N7MXA, Editor

## Modem Insecurity from page 1

accessible by the U.S. government, Interpol, Scotland Yard, and other national security agencies.

What you send by modem can affect your credit rating. If your credit history shows the code HN06443, you have a negative risk rating and code 87T4 is even worse. These codes may have no accompanying data. If you inquire about them, you will be told, "It just comes out of the system that way."

As a consultant for a major carrier, I've been able to watch the systems operate at a Network Control Center in Ohio. Rows of video terminals, each with 30 or 40 "windows," monitor data transmissions as 9-track digital tape machines archive them.

Everyone should realize that a SYSOP-posted disclaimer about having no access to governmental agencies or law enforcement is worthless. So whenever you enter a message, even a private one, assume it will be seen by everyone everywhere.

from @KA8Z via the October '92 Inland Empire VHFRA 'Repeater'—KA7CSP Editor

## National Calling Frequency

by Roger Carl, W6SXX

146.520 MHz is known as the National FM Simplex Calling Frequency. It is primarily for limited power transmissions and calling from mobile stations. Once contact is established, operators should change to another standard simplex frequency, such as 146.550, leaving the calling frequency clear for others.

Simplex 146.520 should *not* be used for contests, exercises, or for conversations longer than required to agree on another frequency.

## Cosmonauts on Shuttle

Cosmonaut Sergei Krikalev, U5MIR, and Vladamir Titov will fly on a U.S. space shuttle some time in 1993. So far, NASA hasn't said whether U5MIR will operate

Keeping standard calling frequencies clear retains their value, especially in emergencies. Other standard band-plan simplex frequencies on 2 meters start on 146.414 and are found every 15 KHz up the band to 146.595. Another set starts at 147.420 and ends at 147.585.

If you use a scanner, set 146.520 into memory so you can hear someone calling in an emergency situation.

from the October '92 Sierra Intermountain Emergency RA 'Siera'—N7MXA Editor

Amateur Radio from the shuttle, as he has from the Russian space station, Mir.

from Space News, via the November Austin ARC 'AARCover'

## Ham Licenses for Uganda?

**continued from page 1**

Uganda is a beautiful country, with rolling hills, mountains rising to over 16,000 feet, and famous lakes, including Lake Victoria and Lake Albert. The altitude makes the climate favorable despite the equatorial location. Kampala is at 4,200 feet.

I spent weekends visiting the source of the Nile, Lake Mburo, Murchison Falls, and Queen Elizabeth National Park. But don't expect paved roads and luxury hotels—except at Queen Elizabeth Park.

Most Ugandans live off small subsistence-level farming plots. Equipping a ham station would be quite impossible without assistance for all but a few. The UPTC officials became excited when I explained that, once hamming becomes legal, permanent stations for Ugandans to use could be set up by visitors using donated equipment. They suggested a Makerere University radio club could form and provide a site. They wanted to avoid any arrangement that might appear they were using their positions for personal gain.

I plan to submit a proposal for several operators to come to Uganda and stay at a lodge in one of the game parks for several weeks—to initiate amateur radio operations—before establishing a permanent

station in Kampala. QSLs with photographs of Ugandan park scenes would be good international public relations.

I enjoyed my month of work and travel in Uganda, and I would welcome requests for more information (call 505/989-7565).

To support opening Uganda to amateur radio operation, serious DX'ing travellers can write:

Mr. Simon Bugaba  
Uganda Posts and Telecommunications  
Box 7171  
Kampala, Uganda

Mr. Bugaba's home address is Box 10577, Kampala and his home phone number is 261 (Uganda) -41 (Kampala) -246-360.

You could also write to:

Mr. Shem A Sunday  
Acting General Manager—Engineering,  
Planning, and Construction  
Box 7171  
Kampala, Uganda

Mail to Uganda takes about 10 days and appears to be reliable. Return airmail costs 300 Ugandan shillings, about U.S.\$0.25. Phone connections are good, though not inexpensive.



# NCDXC DX-LADDER

CALL	HONOR ROLL			DX TOTALS				DX BAND TOTALS					OTHER BANDS				
	MIX	PH.	CW.	MIX	PH.	CW.	RTY	10m	15m	20m	40m	80m	160m	06m	12m	17m	30m
W6BSY	323	323		366	360												
W6KH	323			364													
K6RQ	323			362				120	197	310	130	90	5				
W6MUR	323			361													
W6CF	323			355	294	185		204	239	306	178	138					
W6ISQ	323	321	322	355	331	322		285	150	250	315	256					
K6MA	323	321	318	354	340	321		255	265	290	205	131		165	190	115	
W6ERS	323			353				100	100	100	100	100		100	100	100	
K6PU	323	323	313	353	343	319		200	200	300	200	100					
W6BJH	323			349	192	313		120	117	187	117	100					
W6RJ	323			348				100	100	100	100	100					
K6OZL	323			343				100	100	100	100	100					
WA6AHF		323			342		231	100	100	100	100	100					
W6LQC	323	323		341	341	89		100	100	100	62	93					
W4RIM	323			341	341												
W6XP	323	323		341	341												
W6TC	323		320	339		326		252	231	273	263	175	1	110	103	89	
K6XJ	323	323		338	338												
K6RK	323			337	329	315		100	100	100	100	100	95				
N6JV	323		321	334	320	326		263	252	302	255	208	76	149	179	151	
WB6CUA	323	317		331	326	314		100	100	100	100	96					
N6ST	323	302	260	330	304	244		200	228	297	144	74	2	1		2	
WX6M	323	323		328	328	148		169	169	208	130	111	17				
W6OSP	323			328													
NB6L	323			326	256	222		125	157	233	109	105					
W6HXW		323			323												
W6ZM	322	322		357	352			130	142	317	52	111					
K6WR	322	322		354	354			100	100	100	100	100					
W6DU	322			342	302	325		225	254	319	159	109					
W6KOE		322			341												
WA6SLO		322			324			290	308	323	224	218	6	18	171	132	
AJ6V	321			328	235	268		153	173	261	136	62	6				
W6NLG	321	319		326	324	100		100	100	100	26	6					
W6FAH	321			322	317	282		223	247	302	164	144					
W6ZKM	320	320		344	344			207	100	100	107	126					
K6LQA	320			338													
W6GO	320	320	314	334	334	322		270	300	324	264	220	60				
W6PHF	318			350	336												
N6AN	318			339	288	287		281	281	307	177	118		68	100	41	
W6DPD	318	318		323	323												
WN6R	318	317		318	317	200		215	300	317	155	150					
K5GOE	317			330	324			200	100	100	100	91					
W6NPY	317			330	200	265		200	200	200	178	139					
WG6P	317	317		321	321	316	156	184	210	303	207	118	12	3	6	1	
N6HR	316			337				100	100	100	100	100					56
K6WD	316			330		277		100	100	100	100	65					
K6ZX	316		307	328		312											
K6LM	316	312	307	321	316	309		100	100	100	100	100					
K6DC	315			359													
W6QL	315			337	263	69		114	161	201	111	103					
DJ6RX	315			336				215	271	303	227	185					
AG6Q	315			321	309	220		173	222	296	167	143					
W8MEP	315			318		141		100	100	100	41	27					
W6KG	314			352	290	108		161	193	210	169	105					
KG6GF	314			319				70	120	210	293	170					
WB6ZUC			313	329	1	319		188	255	315	168	110					
K6DT	312	307		340	320	293		229	251	328	153	121					
W6JZU	312			328				75	115	255	22	12					
K6OJO	312	311		328	327			187	250	309	17	12					
K6XT	312			327		160		100	100	100	100	99					
WA6HAT	312			320		243											
K6HHD	312			316	311	23		209	176	223	43	40					
W6TSQ				355				285	300	300	315	257					
W6OAT				349	326	332		269	304	333	270	199					
W6CTL				338	4	287		214	190	335	94	11					
W6FGD				330	275	289											
N6OJ				329	275	105											
W6AED					325				100	100							
W6JD				325	233	302		109			191						
W7XA				325				277	298	309	174	137					





# NCDXC DX-LADDER

CALL	HONOR ROLL			DX TOTALS			DX BAND TOTALS					OTHER BANDS					
	MIX	PH.	CW.	MIX	PH.	CW.	RTY	10m	15m	20m	40m	80m	160m	06m	12m	17m	30m
WA6O				235				89	52	144	3	19					
WA6OEY				227				71	60	170	20	8					
K6BWX				225	1	224											
KD6GC				225													
AD6E				223	2	217		113	128	166	105	26	3				
N6LTN				213													
W6ROY						208											
KA6BIM				196	190	59		108	131	141	33	8					
AB6EQ				186	178	50		75	27	138	10			7	7	3	
AA6LF				186				93	79	149	10	1					
AA6TA				180	180			81	44	86				1	1		
AA6TD				178	95	125		90	55	101	39	3	1				
KC6ESL				175	175			175									
N6VAW				152	77												

de Larry, KD6XY (12-92)

## DX-LADDER:

The DX Ladder Report takes on a new form.

Previously all records were sorted, and listed, by Call Suffix, not taking into consideration each members achievements towards climbing to the top of the ladder. What would be more appropriate than to list contacts according to a true LADDER format, highlighting each members accomplishments on the way to the top?

The DX Ladder Report in this issue of the DX'er is sorted, first by the Call of members who have achieved Honor Roll status, listing their totals. The second sort is according to total Mixed, Phone/CW, or DX contacts, for those who haven't reached Honor Roll but are on the way up.

would like to receive some feedback whether this new format is preferred over the old one. Space has been provided in the form below for any comments, and at the same time the form will make it easy for your next updates. The top Countries count at present is 323.

Due to space limitations the WAZ Report does not appear in this issue. It will appear next time.

Should the new report format be continued? \_\_\_\_\_

Comments: \_\_\_\_\_

CALL: \_\_\_\_\_ NAME: \_\_\_\_\_

### NCDXC DX-LADDER

HONOR ROLL:- Mixed: \_\_\_\_\_ Phone: \_\_\_\_\_ CW: \_\_\_\_\_

DX TOTALS:- Mixed: \_\_\_\_\_ Phone: \_\_\_\_\_ CW: \_\_\_\_\_ RTTY: \_\_\_\_\_

DX BAND TOTALS:- 10m: \_\_\_\_\_ 15m: \_\_\_\_\_ 20m: \_\_\_\_\_ 40m: \_\_\_\_\_ 80m: \_\_\_\_\_

OTHER BANDS:- 160m: \_\_\_\_\_ 6m: \_\_\_\_\_ 12m: \_\_\_\_\_ 17m: \_\_\_\_\_ 30m: \_\_\_\_\_

### NCDXC WAZ-LADDER

ZONES WORKED: Mixed: \_\_\_\_\_ Phone: \_\_\_\_\_ CW: \_\_\_\_\_

WAZ BAND TOTALS:- 10m: \_\_\_\_\_ 15m: \_\_\_\_\_ 20m: \_\_\_\_\_ 40m: \_\_\_\_\_ 80m: \_\_\_\_\_

OTHER BANDS:- 160m: \_\_\_\_\_ 12m: \_\_\_\_\_ 17m: \_\_\_\_\_ 30m: \_\_\_\_\_ 6m: \_\_\_\_\_

WPX CONTACTS:- Mixed: \_\_\_\_\_ Phone: \_\_\_\_\_ CW: \_\_\_\_\_

(Mail figures to Larry Bloom, KD6XY, to the address listed in the DX'er, or send via Packet to KD6XY.)

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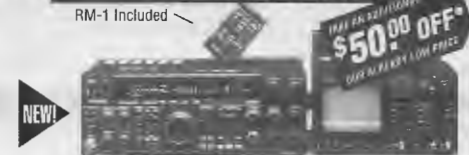


12v 100W, Gen. Cov. Receiver  
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DDS • DSP Optional • Dual VFO  
Optional Built-in Auto Antenna Tuner

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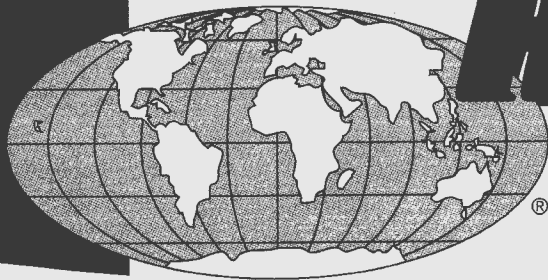
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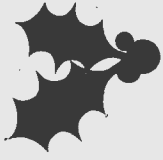
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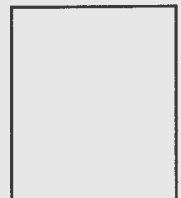
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