



# the RARA RAG

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NO. 5

## TIME DOMAIN MODULATION A DIFFERENT APPROACH TO SPREAD SPECTRUM

The January 5th meeting of RaRa will feature a presentation on Spread Spectrum by Fred Cupp, W2DUC. Fred researched several articles on the subject, and actually built a working unit. The technology was originally invented for surveillance purposes and for use as a short range radar.

Fred will also be demonstrating his "working model" at the meeting, showing that the spirit of Amateur "home-brew" is not yet dead. The discussion will also impart some "secrets" he has discovered, such as how to get 100 watts of power out of a 2N2222 transistor (the secret is to pulse the signal for a very short time!).

The meeting will be held at the 40 & 8 Club at 933 University Avenue and will start at 8:00 p.m. Other clubs that have featured this presentation have reported standing ovations at the end, so let's all get out to this month's meeting and partake of the usual after meeting refreshments and conversation.

## WORLD'S LONGEST ANTENNA?

A Very Long Baseline Array (VLBA) of ten antennas in various locations from Hawaii to the Virgin Island may be in operation by 1992. Hopefully, with this large baseline (8000 kilometers) scientists will be able to obtain images of remote quasars, galactic nuclei, and other information heretofore impossible. The key to the system, is the need for extremely accurate timing and frequency control between the far-fetched antennas. This will be accomplished by a hydrogen-maser clock which bases its accuracy on the characteristic frequency of the hydrogen atom. Each receiver will have a transistor preamplifier cooled at the extremely low temperature of 15 degrees Kelvin. Recordings will be made at 256 megabits/sec on 512 tracks!

*SMARC Spark via Auto-Call*

## RDXA MEETING — JANUARY 16th

A propagation forum is the main topic of our next meeting at 111 Westfall Road, Tuesday, January 16, 1990.

A panel of big gun club members will explain their techniques of band jumping and band by band propagation to improve your effectiveness in DXing and contesting. This is a subject in which it is impossible to know too much. Bring a tough problem to ask the panel and get their ideas.

Bring your list of DX stations to address from our 1990 International Callbook and join us for a super evening.

For more information/inquires, call Bob, WE2T, RDXA Secty/Treas at 334-1103.

## FCC DENIES PETITION TO CHANGE NAME OF AMATEUR EXTRA CLASS OF LICENSE IN RM-6648

On October 20, the FCC denied the petition of Keith Greiner, AK0Q, that proposed changing the name of the Amateur Extra Class operator license to "Master of Radio Communications". FCC said, "Implementation of the petitioner's request would ... require significant efforts not only by the Commission but also by the volunteer examiners and volunteer coordinators", referring to the number of licensing forms currently in use that would require modification.

Also cited by FCC was the fact that only 15 members of the public commented in the proceeding out of almost half a million licensees, making the perceived advantage of the name change minimal at best. In closing, FCC stated, "In view of the clear cost of undertaking this rule change and the questionable benefits involved, we conclude that a proposal changing the name of the Amateur Extra Class operator is not in the public interest and does not warrant consideration by the Commission at this time".

*Tnx ARRL Letter*

# the *RaRa Rag*

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## ANNOUNCING THE 43rd JANUARY VHF SWEEPSTAKES

by Wayne King, N2WK

During the weekend of January 20th and 21st from 19:00z Saturday afternoon (2 p.m. local) to 04:00z Sunday evening (11 p.m. local) the 43rd running of the VHF SS will take place. The Rochester VHF Group would like to invite all area Amateurs to participate in this annual event in order to help our club compete against the Mt. Airy VHF Club (the infamous Pack Rats). We ask you to listen for area VHF'ers on whatever bands you have available. Your help is greatly needed. Some of the frequencies to listen on are 52.525, 146.49, 146.55, 146.58, 147.42, 147.45, 147.48 etc and on 223.5 and 446.0 FM simplex.

In order to make the VHF SS more interesting for area hams, the RVHFG is awarding trophies and plaques to area hams who have the most FM only contacts (Q's) 1st, 2nd and 3rd place. We are also awarding for the second year in a row a high score YL plaque. So you young ladies out there please take note. You do not have to be a member of any club in order to be eligible for these 4 beautiful awards. However, if you are a member of one or more Rochester area clubs, you will be eligible to compete with your favorite club in the 5th annual race for the Rochester CUP sponsored by the RVHFG. In order to help your club win the Trophy you must submit a log to the RVHFG contest chairman by February 6th, 1990 by mail or in person. Simply indicate which club you are contributing your score to and the results will be published in a later issue of the *RAG*. The trophy will be presented to the winning club's representative at the RVHFG annual banquet. The RVHFG as a club is not eligible to compete for the CUP, however its members may contribute their score to any other area club as long as they are a member of said club.

I have logs sheets and summary forms available for the asking. If you use the U.S. mail please send a business size S.A.S.E. to Wayne King, N2WK, 30 Adair Drive, Rochester, NY 14606. I will be mailing out these forms to area club officers to be distributed to their members. Please mark the above dates on your calendar. This year's contest will be the weekend before the Super Bowl, so you football fans won't miss out. Please participate and please send in your logs. You may receive a call from me inviting you to our banquet so I can present an award to you. Good luck and I'll be looking forward to working you.

*Not 2 Well Known*

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Amateur Radio News Service

## IC-02AT TRICKS & MODS

by Bob, W8BNYY, *RF-Carrier*

Ever wish your 02 had scan lock out when in Memory Scan? Per the owner's manual, it does not exist. However, it can be done. Here are the steps:

1. Enter the desired skip freq into memory in the usual way, but make it 20kHz high. That way it will be skipped when in Memory Scan.

2. To recall it, pull up the Memory channel in the normal way but hitting CL/STOP, MR/MW and the channel number.

3. Here's where it gets different and you will not find this in the manual (at least it's not in mine). Hold the Function button and press CL/STOP. This writes the memory freq into the Dial memory, but leaves it intact in the memory for future skipping.

4. Hit the Star\* button twice. This lowers the freq in the dial 20 kHz to the desired freq.

Now you can listen to the desired freq and it will still be skipped in Memory Scan.

If you want the original freq to now reside in the memory, simply write it to the memory in the normal way. By the way, step 3 can be used to write any memory freq to the Dial Memory. One button skip it isn't, but it's the best you can do on an 02. You guys with the WX mod will like this a lot!

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## W1AW TELEPRINTER TRANSMISSIONS

Recently, in response to suggestions that the AMTOR transmission be sent first on teleprinter bulletin transmissions, W1AW conducted an informal poll of listeners. The results were dead even, indicating no mandate in either direction. Since a large number of those who copy AMTOR said that they do so by automatic means and that it makes no difference to them which transmission is first, it seems to us that W1AW can best serve teleprinter listeners by retaining the Baudot-ASCII-AMTOR order of transmission. Further inputs are welcome. *Tnx ARRL Letter*

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## SOME THINGS TO THINK ABOUT

Snow flakes are one of Nature's most fragile miracles, but look what they can do when they stick together!

The only real difference between Stumbling Blocks and Stepping Stones is the way that you perceive them.

If you keep both feet on the ground all the time, you won't get very far.

*Tnx SMARC Spark via Auto-Call*

## RaRa CALENDAR FOR JANUARY

- 1 - HAPPY NEW YEAR!!!  
DON'T DRINK AND DRIVE!!!
- ARRL Straight Key Night
- 3 - West Coast Qualifying Run -  
10 - 35 WPM - starts at 0500 Z 1/4
- 5 - RaRa Meeting - 8:00 p.m.  
40 & 8 Club, 933 University Avenue
- 6-7 - ARRL RTTY Roundup  
1800 Z 1/6 to 2400 Z 1/7
- 7 - Genesee Repeater Association  
9 a.m. - Perkin's, Jefferson Road
- 9 - Squaw Island ARC Meeting -  
8:00 p.m - Sheriff's Office,  
84 Ontario Street, Canandaigua
- 10 - W1AW Qualifying Run -  
35 - 10 WPM starts at 10 p.m. EDT
- 11 - Packet Group Meeting - 7:30 p.m.  
111 Westfall Road
- 12 - VHF Group Meeting - 7:30 p.m.  
111 Westfall Road
- 15 - Martin Luther King, Jr. Birthday  
Holiday Observed
- 16 - RDXA Meeting - 8:00 p.m.  
111 Westfall Road
- 17 - Kodak Park ARC - 12 Noon  
1st Floor, Building 28
- Drumlins Meeting - 7:30 p.m.  
NYS Disaster Preparedness HQ,  
Route 31, Newark (across from the  
State Police Barracks)
- 19 - RRRRA Meeting - 8:00 p.m.  
Pittsford Town Library
- 20-22 - ARRL Jan. VHF SWEEPSTAKES!  
1900 Z 1/20 to 0400 Z 1/22
- 21 - Genesee Repeater Association  
9 a.m. - Perkin's, Jefferson Road
- 25 - W1AW Qualifying Run -  
10 - 35 WPM starts at 7 p.m. EDT
- 26-28 - CW World Wide 160 Meter DX Con-  
test-CW - 2200 Z 1/26 to 1600 Z 1/28
- 27-2/4 - ARRL Novice Roundup
- 27-28 - UBA Contest - CW  
1300 Z 1/27 to 1300 Z 1/28
- YL-ISSB QSO Party - CW  
0000 Z 1/27 to 2400 Z 1/28
- 28-29 - Winter Classic and Homebrew Radio  
Exchange -  
2000 Z 1/28 to 0400 Z 1/29

# I GOT A NEW PACKET RADIO TNC FOR CHRISTMAS, NOW, WHAT DO I DO WITH IT?

Then come to the Rochester Amateur Packet Society meeting (RAPS for short). This month we will be having a variety of packet stations set up for a "hands-on" live demonstration in the use of packet radio. This is the ideal time to take a look and learn about this mode of operation and see how to operate packet for yourself.

The R.A.P.S. (a sub-committee of RaRa) holds their meetings **EVERY SECOND THURSDAY OF THE MONTH** through May 10. We convene this **January 11 at 7:30 p.m.** in the auditorium on the first floor of the Monroe County Social Services Building, 111 Westfall Road, located at the corner of Mt. Hope and Westfall near Interstate 390. Our goal is to provide a service to amateur community by providing a source of information on packet radio. We also provide a pool of trained packeteers that are willing to help in times of need or emergencies. Our meetings are held in forum style to promote a free flow of information concerning the many aspects of packet radio that will give any person a chance to ask questions or state their opinions or concerns in the field of packet radio.

If you have any questions about packet radio and are unable to attend any of the RAPS meetings, please contact any of the following RAPS officers.

Chairman: Keith Hibbert, KE2DI, 533-1398  
Vice-Chairman: J. D. Van Griethuysen, N2BNE, 663-8192  
Secretary: Roger Harnaart, WB2BWQ  
Treasurer: Jim Centanni, W2IMK

The RAPS meetings for the rest of this radio year are scheduled for the following dates:

January 11, 1990	February 8, 1990
March 8, 1990	April 12, 1990
May 10, 1990	

We hope to see you at the meetings. But if you can't make it to any of the RAPS meetings, please leave a message, or have a friend leave a message addressed to any of the group's officers at the any of the local BBS's. For an example S N2BNE @ WB2WXQ, will send a message to N2BNE at the WB2WXQ bbs, even if you are "logged" onto another bbs.

73's and seasons greetings from  
J. D. Van Griethuysen, N2BNE @ WB2WXQ

# THE RaRa RAG 20 YEARS AGO — JANUARY 1970

by Ed Gable, K2MP

The Eddie Meath Pennython had a record year as 140,456 pennies were collected to purchase toys for local hospitalized children. The Amateur Radio Community assisted by picking up pennies and "quiet money" from pledges called into radio personalities Eddie Meath and Eddie Dunn (W2ECH) on WHEC. Over 46 area Hams participated making this one of the largest such public service events ever conducted.

Program Chairman Tom Ball, WA2THS, provided a NASA film dealing with the Apollo missions for the January meeting. Helen Smith, WA2YRH, acting as Ticket Chairman (Note: "Chairman" is a quote) for the Valentine Dinner/Dance sez "come and get 'em for \$5.00 a person". Chuck Oneske, K2YCO, VHF SS Contest Chairman, urged everyone to participate for the club. Contest committee people were: John Lucas, WB2BEH; Jerry Vogt, WA2GCF; Bill Kirkbright, WA2HWC; Harvey Price, WB2IUM; Linc Cundall, W2QY; Joan Vogt, WA2YTK; and Florence Kirkbright, WA2QXB. John Reiser, W2BLR, FCC Engineer-In-Charge, Buffalo District, reports that Amateur Exams are now every Friday at 9:00 a.m. Stellar Industries of Ithaca, New York, continues as a long time advertiser.

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## CODE AND THEORY CLASSES FINISH

The Fall 1989 classes are now history with another very successful session. Bob O'Connell, NF2Z, Novice Course Director and Theory Instructor, along with the ever patient and equally hard working Joe Phillips, W2DHV, code instructor, have again turned wide eyed civilians into new Radio Amateurs. Comments such as "I never thought it was so easy" and "Gee, those guys made it so simple" or "I would have done this years ago if I knew about RaRa" are recurring themes when chatting with the new Novices. The Tech/General theory classes likewise faired very well with many participants already sporting their new upgrades via the RaRa VE Team examinations. Ed Gable, K2MP, RaRa Licensing Program Director and theory instructor manned the chalkboard while Bud Young, WA2UGE, made the 13 WPM code practice sessions very interesting with his easy relaxed style and always nice to copy fist on the straight key. When you see these guys, say a hearty "thanks" for their dedication to the betterment of Ham Radio and to your club.

## PHASE LOCK RUBBISH

by R. F. Burns

It used to be that a transmitter's output frequency was controlled by an LC (coil-capacitor) oscillator. Such a high Q circuit produced a signal on only one frequency and if the rig was well designed and temperature compensated, the frequency would be quite "solid" (it didn't drift).

About ten years ago, a trend began towards using digital electronics and phase lock frequency synthesizers to set a transceiver's frequency. This technique offers several advantages. Firstly, the output frequency is rock solid (the "rock" in this case being a quartz crystal). Secondly, the digital signals created can be used to produce a numeric (or digital) frequency display. Virtually all transceivers of recent design use this technique.

You may not be aware of it, but your new transceiver is not what used to be called "continuous tune" (able to tune any frequency within an amateur band). Rather, it tunes in discrete steps. If these steps were of 100 Hz it would be quite difficult to tune in a CW or SSB signal properly. Most manufacturers, therefore, design for 10 Hz steps. This effectively provides continuous tuning (so far as your ear is concerned).

Now for the down side! If the manufacturer goes cheap on the design, the frequency synthesized signal may contain numerous low level sidebands, each an exact multiple of 10 Hz removed from the carrier. These sidebands may extend 100 KHz or more above and below your carrier frequency, possibly putting you out of band (technically). These undesired signals are referred to as phase noise.

"Well, so what?" you say. "If these signals are low level, who is going to hear them?" Amplify them through a linear amplifier and they won't be low level any more. Or try operating close in frequency to a nearby ham. Even if you are operating 100 KHz or more apart (you're on CW, he's on phone, for instance) you could be causing each other a bagful of QRM.

Be an informed consumer. Before spending money for a rig with numerous bells and whistles, try to hear it on the air and be critical of what you hear. Vote for a cleanly designed rig - with your wallet!

*Various sources via The Groundwave*

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**FOR SALE:** Heathkit HW-101 Transceiver with desk mike, power supply, SWR bridge - \$250, excellent shape. Call Scott Koelle, KA2YCO, 637-6297.

## SCAM ARTIST ARRESTED

by Bob, WA6ZLO, via The Readout

The perpetrator of a SCAM on ham radio operators last year has been arrested. Michael D. Harrison, 36, WB2PTI, Oceanside, New York, was indicted on 50 counts of mail fraud on August 28th by the United States District Court Grand Jury for the Eastern District of New York. Each count carries a five year prison term and a fine of \$250,000, which adds up to a whopping 250 years in jail and \$12.5 million fine.

The 12 page indictment charges that between August 1988 and January 1989, Harrison (also known as John McNamara and Mike Hanson) illegally devised a scheme to obtain money by means of false and fraudulent pretenses and representations using the U.S. Mail. Harrison placed full page advertisements in 73 Magazine advertising Atlas Radio and Uniden Electronics had joined forces and were back in business offering the new Uniden 2510 ten meter mobile transceiver at \$219.95.

The ad gave a post office box in Lynnbrook, New York and a Long Island, NY telephone number. A similar ad was placed in the Ham Trader Yellow Pages and Popular Communications magazine. Investigation revealed that Harrison had nothing whatsoever to do with either company and accepted orders and payments with no intention of delivering the radio. Harrison cashed all the checks and put the money in his pocket and never shipped one unit.

The amount of money he got away with is reportedly substantial. Some orders were as much as \$3,000. In his ads, Harrison refused to accept credit cards because the prices he was offering were so low that he could only accept checks or money orders which he promptly cashed.

There is an old Chinese proverb, *if it sounds too good to be true, it probably is!* Harrison was arrested at his home by Federal Agents on mail and wire fraud charges and released after he posted a \$25,000 bond. (Wonder where he got the money?)

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**ITEMS FOR SALE:** ICOM IC 900 with 146 & 220 & 440 Modules. FM Super Rig, New March 1989, Complete Package Sale - \$850.00; Benrus Monitor Scope, Super Signal Monitor for Packet - \$75.00; Dual Band Mag. Mtg. Antenna. "Untenna", Unity Gain - \$35.00. Make a offer - "WA2ZNC", 1-229-5470.

# YOUR LIFE STORY ON REPEATERS

Tnx Bob, N8ADA,  
and W6SD Carrier and RF-Carrier

At a backyard picnic, a man reminded me that we had met before. *“You gave the talk at the Dallas ARC a couple of years ago about security ... about not talking so much on the repeaters concerning our personal lives. I still remember the things you said”.*

While you may never share my total outlook, some of my observations should cause you to stop and think about some of the things you say on your local repeater. Because repeater activity is usually confined to talking to the same friends – to the point that we recognize each other’s voices – we tend to forget how many eavesdroppers there are. With all the scanners, portable radios that tune the VHF bands, ham rigs sold at flea markets, etc., there is a vast audience out there for your casual remarks. Couple that with the fact that you are listed in the Callbook, and possibly in a local ham directory, and you are inviting problems if you talk indiscriminately.

I made some profiles of people and families I heard on the repeaters and phone patches, I learned the names, addresses and phone numbers of the husbands’ and wives’ employers, their home addresses and phone numbers, the names and ages of and the schools attended by their children. Also divulged were long lists of personal possessions, their vacation plans (with dates and places), the nights they would be out for dinner and a show, and even when they would return home.

Some folks told who was left at home (elderly parent, child, baby sitter), and where they left the spare key to the house ... on and on it went.

I also heard discussions of what kind of medications people were taking, the kind of booze they drank, and the general status of marriages. Is any of this the business of a stranger? Would you go on the local radio station and talk about these personal matters? Its little wonder that you hear so many hams remark, *“Well, I don’t talk on the repeater much, but I listen a lot”.* I should think so, it’s incredible what you hear!

I make it a practice never to talk about a trip as I leave town. Anyone who really needs to know that you are leaving already knows. Don’t tell the whole world. Wait until you’ve returned, and then get on the air to announce your triumphal return. Never mind that the first response may be, *“Oh you’ve been out of town?”* .... Your dog probably missed you.

Many times we use a repeater when direct communication would do the job. If you must talk about your personal life, at least limit the audience as much as you can. And don’t do your fellow hams a disservice by talking to a third party about their plans for evening outings or vacations.

You may think I’m being unrealistic and there is little left for you to talk about. Not really simply use common sense. Ask yourself, *“is this something I would want a complete stranger to hear?”*

NOTE: The article was written by Richard Rhodes, KH6IO, former Treasury Agent, CIA Agent, and lecturer and writer on the subject of security. Think about it!

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## ATTENTION CONTESTERS

Many amateurs have been confused by Part 97.119(a) of the new Part 97 concerning station identification. This rule states, in part, *“... No station may transmit unidentified communications or signals, or transmit as the station call sign, any call sign not authorized to the station.”* ARRL asked FCC for a clarification of this. The Personal Radio Branch (which governs Amateur Radio) of the FCC has okayed the following interpretation:

When another Amateur comes over to your house to operate your station, there are two possible station identification situations:

First, you may designate him as the control operator of your station. Accordingly, he must identify with your station’s call sign when operating within the privileges of both his license and yours. (He signs his call following your call when he operates with privileges that exceed yours.) You both share responsibility for the station operation as outlined above.

Second, you may simply *“loan”* your equipment to your friend. The equipment in your shack then becomes his temporary station location. He is the station licensee and control operator. Remember, a station location is any place you can have radio equipment – a basement, car or specific geographic location. In this case, he identifies with his own station call sign, and is solely responsible for the operation of the station.

Often, hams will travel to another, more effective station to snag a rare DX country through a pileup or work a contest, and want to use their own call sign for DX or contest credit. This is fine under situation two described above.

Tnx ARRL Letter

## INCREDIBLE TECHNOLOGY

How would you like to open the center page of the RaRa Rag and hear Jingle Bell music coming from the page? Or maybe the membership chairman's voice reminding you that your subscription is expiring. Or would you prefer to have snow flakes start floating down the front cover as soon as you pick it up? Or lights blinking out "CQ".

Well, it isn't going to happen in RaRa Rag any-time soon, but the technology is actually being used right now by some of the bigger advertisers in the larger magazines. It is all accomplished by a microchip no larger than a grain of salt and a tiny battery to power it, an amplifier and a trigger that activates the module when the magazine is opened to the insert – or otherwise touched, moved or manipulated. It is possible – now – to produce a voice chip of up to 30-seconds duration. Its just a matter of size and cost. The module has to be bound into a double thickness insert and, at the present time, the cost for large productions is about two to three times the cost of a normal four-page insert. But the attention the insert gets is estimated to be at least 2½ times the normal attention so, if you are talking about cost per exposure, there is little difference between these special inserts and the conventional (4 page) inserts.

People magazine carried probably the first such insert during the 1987 Christmas season. Other ads have been run since that time. Costs can be expected to come down as the technology becomes more advanced. But will the novelty wear off?

*Information from Magazine Design & Production magazine, September 1989 via Auto-Call*

## BONES, BONES, DIGGING UP BONES!

The body of any organization has four kinds of bones:

First, there are the wish bones who spend all their time wishing somebody else would do the work.

Second, there are the jaw bones who do all the talking and very little else.

Third, there are the knuckle bones who knock everything everybody else tries to do, and finally

Fourth, there are the back bones who get under the load and do the work.

*de Burlington ARC via The Groundwave*

Experience is a hard teacher. She gives the test first, the lesson afterwards.

*de Burlington ARC via The Groundwave*

## IN DEFENSE OF TAD...

That detestable, dependable Telephone Answering Device.

Consider this, it never answers the phone with it's mouth full of pizza, or bubble gum, nor does it assault your eardrums when the receiver hits the table and an obviously annoyed voice screams, "Dad, it's for you". Nor does it make you "wait 'til I find something to write with". Your message is delivered exactly as you left it, in your own words, so to speak. Won't talk to a machine you say? Think about it, machines talk to you every day of your life.

They tell you when to get up, when to cross the street, when the roast is done, and they tell someone else how much gas you pumped in your tank.

So don't let yourself be manipulated, fight back, assert yourself, at the sound of the tone state your business, be aggressive, your message will be delivered, exactly as you want to state it, Tad never makes mistakes! bleep.

*Tnx RF-Carrier*

## HAM STATION ON QUEEN MARY QRT

Operation of the Amateur Radio Station aboard the Queen Mary docked in Long Beach was shut down on September 5th. The Long Beach ARC has operated the station from the Wireless Room of the ship for the last 10 years with volunteer operators from clubs all over Southern California. Various problems forced the shut down, one of which was a requirement that operators spend more time talking to tourists visiting the ship. Operation of the station was the only live exhibit in the Queen Mary-Spruce Goose complex.

*Tnx Readout*

FOR SALE: Swan 350 with Power Supply, Very good condition. WB2JFL, 494-1094.

### MICHAEL G. RICE

(KB2SG)

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# PACKET OPERATIONS DURING THE SAN FRANCISCO EARTHQUAKE: LESSONS LEARNED, SUGGESTED IMPROVEMENTS

Lew Jenkin, N6VV, is a member of the Northern California Packet Association which is composed of an extensive packet network made up of hilltop node locations and over 30 BBS systems spread from Redding in northern California to Kern County in the central part of the state.

As one of the packet bulletin board system operators (Sysops) for the network, Lew was involved in handling heavy amounts of health and welfare traffic generated immediately after the October earthquake in the San Francisco Bay area.

After the dust had settled a bit, Lew wrote down his thoughts about the performance of the packet network and lessons learned from the emergency created by the earthquake. Here is a summary of his observation and recommendations:

- Have a network backup plan in place in anticipation of emergency situations.
- Packet is well designed to handle high volumes of Health and Welfare traffic during emergencies. Tactical communications, however, are better handled by voice.
- Because of networking possibilities, packet networks can respond better than any other form of amateur communications to changes in the emergency situations. Members of Northern California Packet Association were able to completely reroute traffic throughout the entire system in less than three hours.
- There is a need for an emergency bulletin designator, supported, but used only in extreme emergencies.
- Every amateur using packet bulletin boards should be familiar with packet NTS procedures. Circumstances generated by the earthquake required as many hams as possible with packet capability to become involved with handling traffic.
- All NTS traffic should be ZIP code routed. A major problem was misaddressed or nonaddressed traffic requiring manual intervention.

Lew feels that the San Francisco earthquake was "*the first great test for this new packet technology*" and in general, passed the test with flying colors.

As of October 21, approximately 3000 Health and Welfare messages were posted on the N6VV bulletin board, and 2200 of them had been delivered. All of the messages were, at one point, carried through the network on 220.90 MHz.

*Tnx ARRL Letter*

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## TELEGRAPHY OBSOLETE? EXXON SAYS YES

Oil companies have obtained waivers from the FCC to eliminate radio officers on many oil carrying tankers. An Exxon spokesman said the need for a trained radio officer originated in the 1930's when someone skilled in Morse Code was needed but "... *that kind of radio telegraphy is now obsolete*".

Unions are objecting on safety grounds, contending every large merchant ship should have someone trained to repair radio equipment and handle communications leaving the Captains and crew to supervise other operations.

Exxon says the absence of radio officers aboard sea-going vessels is ... "*just a false issue raised by certain unions trying to capitalize on the unfortunate Alaskan oil spill*". Exxon says it has ensured safe communications on its tankers by installing duplicate radio systems and training various crew members to operate them.

*W5YI Report via The Readout*

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## SPENCERPORT HAM DOES IT AGAIN

A congratulations goes out to RaRa member C. Friend Stafford, W2AAU, of nearby Spencerport for taking first place in the YL/OM contest for Western New York. This is especially noteworthy as Friend has done so every year for just over 20 years. Which one of you young viral OM's is gonna give this 80 year old YL chaser some competition next year!!!

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