RTTY JOURNAL

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DXPEDITION AWARD

Heinrich Lumpe, DJ6JC receives DXpedition of year award for 1988 from RTTY Journal publisher Dale, W6IWO. Award presented at RTTY dinner in Dayton 1989.

IN THIS ISSUE

RTTY JOURNAL

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HITS & MISSES

REMINDER

This May/June issue is the first of our combined series. The other being the July/August issue. Consequently, your next issue will not be mailed until about the twentieth of August. This gives us all a two month vacation during the summer. So enjoy your summer time and we'll get back in the swing of things come August.

DAYTON

There is really not enough room in this issue to give an adequate report on the HAMVENTION, so look for a full report in the next issue along with some pictures. However, just a few highlights to whet your appetite. For me it was a total success. The "Digital Digest" forum was well attended again and in watching our audience, most of them stayed for the entire session which was one and three quarter hours long. Many interesting questions were asked of the industry representatives who were on the panel. The RTTY JOURNAL hospitality room was packed with digital folks both Friday and Saturday nights. The RTTY Dinner was really a big success also, thanks to the hard work by Bob Foster, WB7QWG and his fine helper Jerry, WA1IUF. Over fifty of the digital gang attended. The Journal also picked up lots of new subscribers for which I'm very thankful.

1988 DXPEDITION OF THE YEAR

At the RTTY dinner in Dayton it was my pleasure to present the RTTY JOURNAL 1988 DXpedition of the year award. Heinrich Lumpe, DJ6JC received this award and was present to accept it (see front cover). Heinrich was quite surprised and was at a loss for words upon accepting the award. This was the first year of this award and I look forward to presenting many more. Jay and Betsy Townsend (WS7I & WV7Y) selected Heinrich's Dxpedition from those entered. 1989 is now half over, so as a reminder, please be sure to enter your favorite DXpedition this year with Betsy at years end. Betsy and her helpers will make a selection sometime before Dayton next year, so keep that in mind.

CQ/RTTY JOURNAL CONTEST 1989

The rules will be published in the next issue of the Journal. However, if you will find them published in the June issue of CQ magazine our co\sponsor for those who would like to examine the rules sooner. This issue contains the 1988 results

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DX NEWS

Well, it is that Time of the Month again.. hi! April, in spite of wildly fluctuating Propagation, has been a great month for DX, and May promises to be equally good. The thing is, that DXpeditions have found that there is true interest in a "New RTTY Country" and some of the well known expeditioneers have come on RTTY. Here was Ron Wright, Zl1AMO, banging away from Wallis Island as FWOBX and Martti Lane as XE1FL from REVILLA GIGEDO (QSL Ron to home Call, and Martti and his group, including XE1L, to OH2BN). In both cases contributions will help, specially if we want to see more of those fine operations from **All Time New Ones!**.. MV Island??

Also during the month of April we saw such goodies very active like: 5B40K, SU1EE, 9M6HF, HV3SJ, A22BW, TA5C, RL8PYL, UM8MU, TK5IU, YI1BGFD, UC1AWW, PJ2MI, 9J2KF, KG4XO, HC8VB, RA9YB, 5Z4BH, V85GA, V85RM, EA9JV, and J87CF, amongst the many. Also occasional RTTY activity from J52US, DL1AOX/UG6 (boy do I need that one.. hi) T5GG (idem), 3B8FP, HH2PJ, A4IKC, ZD8MAC, FG5CI, 3X1SG, OX3GC, HR2JAE, 3C1MB, ZC4BS, and even BY9GA (on 15 Meters).

And by the time the May RTTY JOURNAL reaches you, some new goodies, like T33JS (OCEAN ISLAND) first two weeks of May and the **All Time New One** PY0SY, (ST PETER AND PAULS' ROCKS) (apparently re-scheduled to start 9 May for a week, according to rumor) will be history. And so may 5W1GP's ROTUMA operation, now scheduled to start 13 May... but watch for his RTTY signals, they are supposedly very limited due battery power.

My special congratulations go to the XF4L RTTY group, being able to make a good RTTY score in spite of the incessant Beacons of a C-64 Mailbox, constantly on their calling Frequency.

DX COMINGS;

JG1RVN, Toru San, who also has the call of KH2CE, is definitely all set up to be QRV on RTTY from May 23 to 26 from PALAU ISLAND, in the WESTERN CAROLINES. Toru San is the A-1 RTTY operator who put BV0RY on the air last year for an **ALL Time New One** from Taiwan. Mitsuo San says that he will be transmitting on .090 to .099. He hopes that his friend, KH2A, who has a house on Pelau, with a TH6DXX, will be able to let him use his shack. Call-sign will be issued upon arrival.

In the near future Rod, 5Z4BH will travel to T5, 9X, 9U and D68. For this purpose he will have the use of a Tono 9000E with 5 inch monitor, which Gin San, JA1ACB is kind enough to lend him and should be shipped the end of April. JG1RVN prepared the wiring harness. Rod will hand-carry those items on his travels, and he will be able to get operating permission in 9U and 9X without problem. T5 Somalia is another question, but he will talk to T5GG and try in May. So look this summer for both BURUNDI and RWANDA and possible the COMOROS, and wherever else Rod's duties carry him in that part of Africa.

RL8PYL, ex 3W1A on RYTT, tells me that he will return to VIETNAM, this year, and also hopes to bring up such countries as XW, LAOS and 60, SOMALIA, and the ever hoped for 1S, SPRATLY, plus possibly BY9, ZONE 23. By the way, the 3W logs have been mailed to W4FRU, in separate batches, but had not yet been received at this writing. The cards have been printed in U.S.A.

From 7J1ADJ, we have no news on his planned and often delayed OGASAWARZ operation, but JG1RVN, Mitsuo San, tells me that he will be operating from there if he can get vacation time from his boss in September.

Yama, 5W1GP had to cancel his planned ZK3, TOKELAUS operation as no transportation could be found.. Probably later this year..we pray.

Not much has been seen of DL1OAX/UG1G, in April, and he should be well back home by the time you read this: but don't despair: good news from UA3TT. He is scheduling: UA3TT/RF1F, GEORGIA for early June, and from there: UA3TT/RG1G, ARMENIA for 15-20 June and after that: UA3TT/RH1A, TURKOMAN at the end of June. Nick and Oleg will be very busy, and a lot of us will be very happy if it works out. Some of those will be **All Time New Ones!!**

ZS8MI is now on MARION ISLAND and has had some SSB QSOs. Once he gets himself settled and the most urgent parts of his job taken care of, he plans to be on Radio a lot more, and sure hope he does not forget that RTTY gear he bought.

The last information I have about ANGOLA is that Mario, I5EDX is still in Italy, awaiting rotation of UN troops. Right now he expects to be D2ONU sometime in August. But we all read the newspapers and know that the political situation is not exactly as the United Nations would like it to be and a lot can go wrong. Again, Prayers are highly recommended.

And kind of a surprise, but not a rumor, two well known RTTY expeditioneers are planning a summer operation from CY0, St. PAUL ISLAND: hope to tell you more about that when the next issue of the JOURNAL goes to press.

Ron Wright, ZL1AMO, just back from his outstanding FW0BX operation, is still intending to go to NORTH COOK late May or June. Ron really pleased the RTTY DX crowd with his nice going from Wallis Island, FW0BX and surely

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deserves our applause. Even so ZK1WL is resident in NORTH COOK and has a Tono, donated by JA1ACB, Gin San, but is hardly ever seen: catch him if you hear him on SSB or CW and he is likely to give you an RTTY QSO.

Nothing has been heard further about SOUTH GEORGIA, and T55G, SOMALIA sneaks in now and then, but to me invisibly so, except on SSB. But one previous rumor is now substantiated: S01A, WESTERN SAHARA indeed has RTTY gear and invited Luciano, I5FLN (read all about him in this issue with his disgusting 280 countries confirmed!). Luciano's job would be to bring the gear on the air and train the local gang. Am visiting with Luciano in Florence early in May and will be able to tell you all about what is (maybe) going to happen when I get back.. hi.

S92LB, SAO THOME, still does not have his RTTY gear, but PY2FR has made it his personal objective to get the Tono 5000 from JA1ACB to him; just keep watching that screen, if the XYL lets you.

After finishing up the OCEAN ISLAND operation, Mid-May, the primary RTTY operator, KN6J, Bob, will move to T2, TUVALU for some days. QSL both the T33 and the T2 RTTY operations directly to Bob, at the KN6J Call Book address. (subject to change if the Mail man objects.. hi)

VU2JX and his friends are sill planning the A51, BHUTAN operation within the year, if the finances make it possible., And some offers for financial support and for participation in this exciting venture have already been received. Contact VU2JX at Call Book address for details and possibilities. And watch for TT8CW from CHAD toward latter part of May, QSLS go to F2CW.

And that, is as much forward DX information as I have been able to scrounge together, with a lot of help from fine guys such as JA1ACB, OD5NG, VK2SG, VU2JX , JG1RVN, AA5AU, W6/G0AZT, I5FLN, The West Coast RTTY DX Association, and a lot of others. Every little bit, or "good rumor" helps. Please drop me any info you have and wish to share, via the channels indicated in the April DX Column of the JOURNAL.

TOP RTTY DXERS

Few are the Dxers who are near the 300 level in RTTY, but there are some who are outstanding:

First there is Gin San JA1ACB, with 291 confirmed as of 11 April, 1989, and 7 QSLs pending, making a total of 298.. yes, 298 worked, man, that puts my miserable total to shame.. maybe I should quit and spend the time knitting instead (not likely, unless a beacon mailbox shoots me in passing.. hi!). Now Gin San dates back a bit in RTTY, kind of the Methusalem of RTTY DXers: He applied for a JOURNAL DXCC in 1974, that was when IBM was just toying with the idea of bringing out a personal computer some day. And the ARRL barely realized that there was a Digital Ham Radio Mode up and coming. Some of the QSLs he submitted for that go back to January 1970. Guess I should go to Japan for a course in DXing.

And Gin San has been a staunch supporter of RTTY ever since Tono brought out it's relatively light gear. He has donated or loaned RTTY gear to some 35 stations that I am aware of, and many of these are not New Ones for him.

And there is I5FLN, Luciano, about whom you may read in detail in this issue, in his own words. The ARRL has just endorsed his DXCC for 280 Countries. Besides, Luciano was the first one to earn the coveted WAZ award, and it is now endorsed for 20 and 15 meters. That is why I will be in Italy early May, to find out how you do that. (and with and XYL and two young children and a job at that!).

A lot of those Top RTTYers you may never hear, unless you are a new country, they just do an awful lot of listening and little talking. There are others, like W4JXM and W1DA, who have big totals, but I don't know their scores. I hope to write about "those in the shade" in one of the next issues.

THE TOOLS OF THE RTTY DXER

Possibly a few words should be said of what kind of operating tactics and what little gimmicks should be used to get on the Honor Roll, which the ARRL, in it's wisdom (?), has refused to reduce from the CW/SSB figure for the RTTY Mode, like they did for certain other modes.

First of all: listening (reading) and listening and listening, till the XYL asks if you have fallen asleep over the computer (and sometimes you have).

Then, be sure to run FSK, so that you can read some of those weak and rare ones in the midst of heavy QRM, by switching in your 250 Hz CW filter. Normally I listen only in a 500 Hz width anyway. That permits you to really listen.

When and where are we going to listen? In the February 1989 issue of the JOURNAL, there was an advertisement by W6EL for a Propagation Forecasting Program, called MINIPROP ™, Version III. I had been using the previous version, which was "freeware" and it gave me very good results. So late last year I found out that W6EL had updated it to MINIPROP III ™, so I bought a copy for my IBM Clone. It has been the most wonderful fifty dollar surprise. I don't think there is a better forecasting program anywhere. But everything has it's disadvantages. The program is accurate, but slow. Unless you have a Math Coprocessor in your machine, then it does a pretty quick job. Never knew what those Math Coprocessors were for .. hi. Well this program will tell you on what band to look for that station and when; plus maybe even drop him a note for a schedule.

Next, you have to work the station, maybe with a lot of competition. So you send a lot of RYRYRYRY, then wait a fraction of a second and give your Callsign, all in vain. Why?

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MSO'S

Hi Gang! As I sit here drafting up this months issue of the MSO column, I can hear robins chirping in the back yard, so it must mean that spring isn't far behind. And of course the Dayton Hamvention is just a couple of weeks away. My how fast time flies when you're having fun! This months MSO column may be a little shorter than usual, as I have just returned from two glorious weeks in Florida on vacation. And the Dayton Hamvention is next week! There's just not enough hours in the day.

W5QXK MSO BACK IN OPERATIONS

I'd like to start this months column out by welcoming back to the National Autostart frequency, (14 085 625 HZ Mark), Don Keifer, W5QXK, whose MSO has been off the air for a while. Don unfortunately fell and broke one of his ankles, and has been on the disabled list for some time. Don's MSO, (access Code MSOQXK), is located in Kaufman, Texas, a suburb of Dallas. Don provides not only HF MSO service in his area, but also provides MSO service on VHF in the Dallas area. He is also an ARRL official bulletin station, and keeps the ARRL bulletins current in several MSO'S. Don also tells me that he's going to provide packet digipeater service in the near future. Glad to have you back Don, and good luck with all of the systems!

HAL ST-6000 CRT UPDATE

It appears that some of the Millen one-inch CRT'S may work well in the popular HAL ST-6000 Deluxe Demodulator. However, according to reliable sources, the CRT socket and wiring to the socket is not the same as the factory wired units. So, if you happen to replace the original CRT with Millen Tube, be sure that you check the wiring for the right connections.

ROYAL VISITATION

It was with a great deal of pleasure and enjoyment that my XYL and I visited Jerry and Annette Trichter, WA1IUF, during our recent vacation in Florida. The imperious leader of the world renowned International OH-WHA-TAH Society has a beautiful home in Bradenton, Florida, and their gracious hospitality was certainly appreciated. Not only has Jerry found the ways and means to continue to enjoy his RTTY pursuits from his retirement home, but even more exciting is his ability to fish right out his back door! Now Jerry did provide us with some verbal descriptions of the fish he has caught, (relatives no doubt of Jaws), and I suspect that the Florida State fishing records are in serious danger! Thanks for a very enjoyable visit Jerry!

MSO BASICS, PART II

Utilizing a MSO should be no more difficult than any other RTTY QSO. In fact, it should be quite a bit easier, as the MSO appears on the exact same frequency day in and day out. So, the remote user has only to know where to look for the MSO, and be confident that his equipment is calibrated well enough to get within 20 to 30 Hertz of the MSO frequency. Accurate frequency control while accessing the MSO, and while utilizing the MSO, is paramount. "Fishing" expeditions for the MSO are time consuming, they waste frequency spectrum, and are not needed if the remote user properly calibrates his equipment.

I think first of all a user should understand what his digital readout on his transceiver is presenting him. Is it the mark frequency, the space frequency, or possibly the carrier frequency? Traditionally over the years, RTTY enthusiasts have always used the "mark" frequency to define where their station output would be in the spectrum. For example, the National Autostart Frequency is listed as being on l4 085 625 Hertz, mark frequency. This simply means that if two stations both place their mark tones on l4 085 625 Hertz, they should be on exactly the same frequency.

The mark tone is 2125 Hertz lower than the carrier frequency. For 170 Hertz shift, the space tone is 2295 Hertz lower than the carrier frequency, (or an additional 170 Hertz lower than the mark frequency). It is the transition between the mark and space frequency that carries the intelligence in RTTY signal.

Different Digital Readouts Used

Many transceivers, even within brand names, have different digital readings in the RTTY mode. For example, the Kenwood TS-940S digital readout reads the space frequency when in the RTTY mode: The Kenwood TS-440S reads the mark frequency, etc. Consequently, the remote user must first understand what his transceiver digital readout is providing him in the way of RTTY information, before he starts hunting for a MSO. Once understood, it's just a matter of dialing in the correct frequency and the MSO will respond immediately to your commands.

As an example, if you are using a Kenwood TS-440S transceiver, and attempting to locate the National Autostart Frequency, you should be able to simply dial in l4 087 75 Hertz on your digital readout, and the MSO of your choice should respond to your command. This assumes of course that you've taken the time to properly calibrate your TS-440S. If you are

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You sent those RYs supposedly to synchronize with the stations receiver but then in the time you switched to typing your Callsign, you put out a pure Mark Carrier.. and goodbye synchronization. In any event, instead of the RYs send your Callsign a few times, but more then that, many programs and modulators, offer a feature called "Synchronous Idle", also known as "Diddle". The popular PK232 recently even added a firmware upgrade, adding, amongst other things, the "Diddle". What a "Diddle" does is to send a series of non-printing idle characters, generally for baudot a "letters" character. That way your contact's demodulator maintains synchronization with you, even if you are as poor a typist, as I am. And that simple feature will assure you of many a Q-5 QSO which would otherwise be,("Not in the Log").

The next item is: try to get the "IN" on a VHF Packet BBS which specializes in DX. I saw one in New York recently and was tempted to hire a private phone line to Guatemala, as the up-to-date, truly current information in there, is terrific. Not only who and where but the state of the Pile-Up.

Now then, try to have your QSO exchange ready in a Buffer, one's fingers get awfully shaky in a major Pile-Up, when you suddenly see yourself being called, at least so it is with me.

Then, there is the problem of frequency determination when making a Schedule. Some of us talk "Mark Frequency" (the actual frequency of the Mark Tone; and some of us talk "Dial Readout", which should be 2125 Hertz above the Mark Frequency.. if.. if you are running High Tones, a 2125/2295 Hertz tone-pair. But many people run Low Tones, 1275/1445 Hertz, and that of course is a different receive/transmit frequency which appears on your dial, or on the dial of the station you made a schedule with, though one can read the other fine if the Mark Frequencies coincide, but on apparently different frequencies. *(See MSO column this issue for more info on tuning RTTY signals.)*

On AMTOR "the Frequency" is now well agreed as meaning the Mark Frequency of the tone pair. If you wish to be sure, make your scheds for a Mark Frequency, rather then a Dial Frequency which may mean nothing. And blessed you are if you have gear, which shows the Mark Frequency on the dial.

And the last thing, before Dale ties me to the Anode of my Amp, is the quality of logging. If it is not perfect, you have no way of tracking what you miss. I have a nice Logging Program, which will also print your QSL cards, and which was made here by TG9VT, suitable for IBM Clones, with a Hard Drive. It will print your DXCC standing by band and by mode, and it is available without cost; just send me a formatted 5 1/4 inch floppy, a mailer and postage, and enter your QSOs'

CIAO

Have a good summer, catch all the DX you hope to catch, and may the Good Lord Bless you All! 73 and stay clear of the Beacon mailboxes: de John, TG9VT and my Word Processor

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using a Kenwood TS-940S, you need to do a little arithmetic in order to find the National autostart frequency. First you have to understand that your digital readout displays the space frequency, (while in the RTTY mode). You know that the space frequency is 170 Hertz lower than the mark frequency. The National Autostart Frequency is on l4 085 625 Hertz, which means you need to subtract 170 Hertz from the mark frequency, (since the space frequency is another 170 Hertz lower the mark frequency), in order to determine the correct space frequency. This will provide you with a frequency reading of l4 085 455 Hertz, and if you dial that frequency into your TS-940S, you can access the MSO of choice on the National Autostart Frequency. Again, the accuracy of your digital readout is totally dependent upon how carefully you have calibrated your transceiver. Since you need to be within 20 to 30 Hertz of the MSO frequency, you can see the need to carefully calibrate your transceiver, and, it's very appropriate to do this calibration only after you are assured that your transceiver has reached its normal operating temperature. To attempt to calibrate a transceiver from a cold start, or for that matter, to find a MSO from a cold start, is predictably fruitless.

Check the Calibration

Another good way to check the calibration of your transceiver is to check the mark tone output while in the transmit mode, with a good RF counter. If your mark is supposed to be on 14 085 625 Hertz, and your counter shows it's elsewhere, then you can be sure you won't find your favorite MSO. Be sure that your RTTY system is outputting a steady mark tone, and not in the diddle mode, as your counter will attempt to average the signal if it's diddling between mark and space, and that will be nothing less than confusing!

Next issue we'll attempt to define some good (and bad) operating techniques while using the MSO's. Good hunting, and if you have any questions, or need further explanation, don't hesitate to drop me a note to my home address, or to the RTTY Journal.

That's it for this month gang. Sharpen up that lawnmower!

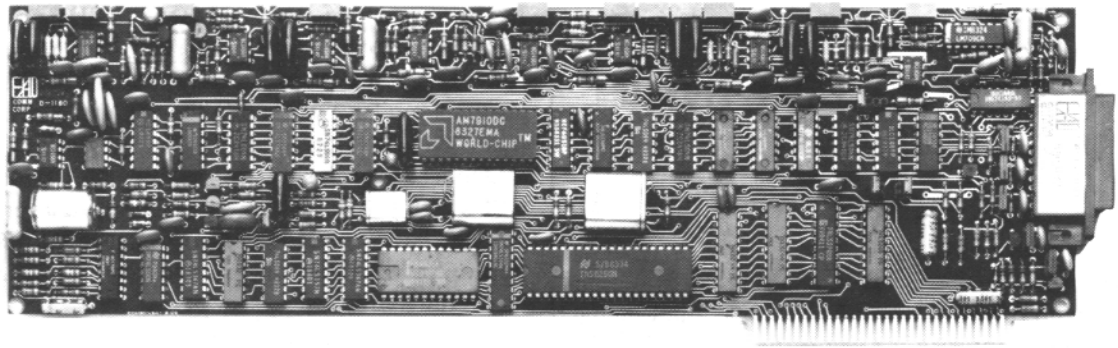
--73-- **de Dick, K0VKH** ■

COMPLIMENT YOUR PC . . .

WITH THE BEST!

PCI-2000

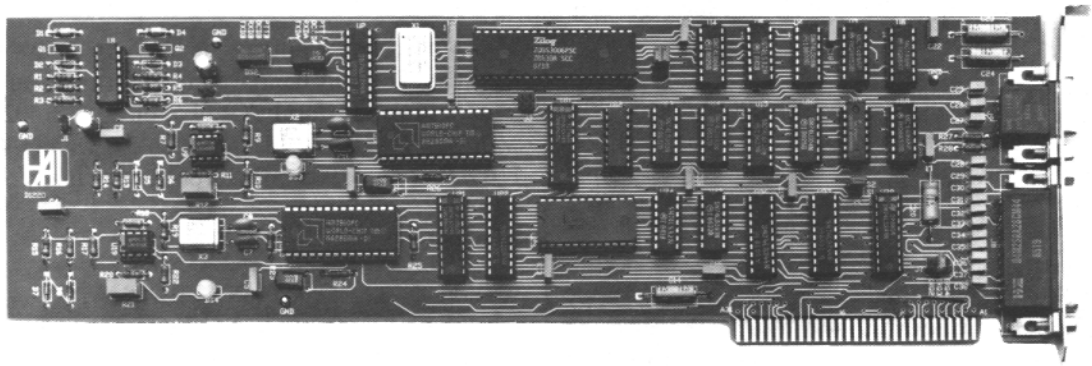
PERSONAL COMPUTER INTERFACE



The PCI-2000 is a high-performance radio communications modem card for the HAL DS-3200 Radio Data Communications Terminal or any fully IBM-compatible computer. The PCI-2000 plugs into the computer just like any full size expansion card and will transmit and receive both RTTY and Morse code. Included on the card is a high-performance RTTY demodulator which includes separate active filters for mark and space, wide dynamic range limiter and detector, and autoprint noise suppression circuits. The PCI-2000 operates at all standard shifts and data rates for ASCII and Baudot and utilizes automatic speed tracking on Morse receive. The software provided offers a high degree of operator flexibility for normal communications as well as for extensive traffic handling operations.

RPC-2000

TWO-CHANNEL RADIO PACKET CONTROLLER



The RPC-2000 is a TWO-CHANNEL radio packet controller that adds fast, error free data communications to radio links. It plugs into an expansion slot of the HAL DS-3200 Radio Data Communications Terminal or any fully IBM-compatible computer.The RPC-2000 uses Packet Radio protocol based on AX.25 to provide data communications at rates from 45 to 4800 Baud.With its built-in modem and RS-232C I/O (for an external HF modem such as the HAL ST-7000 or ST-8000), the RPC-2000 is ready to work on VHF or HF. The software provided is entirely menu driven eliminating the need to memorize complicated commands and procedures.

CALL US FOR MORE INFORMATION AND PRICING ON THE PCI-2000 AND RPC-2000

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Roy Gould, KT1N
PO BOX DX
STOW, MA 01775

CONTEST DIRECTOR
RTTY JOURNAL

1988 CQ/RTTY JOURNAL W/W RTTY CONTEST REPORT

The conditions were excellent, the activity fantastic and as a result the scores are way up from last year. For example, the winning score of last year, would not even put you in the top 10 this year! Scores basically doubled. Just about the same number of entries as last year, 290 compared to 298 for the inaugural event.

This years event was once again Co-Sponsored by the RTTY Journal and CQ Magazine and I would like to thank Dale W6IWO of the Journal for all his help and support. Also a big thanks to George KB2VO who put together a great program to help compile and sort the results. It certainly made things go a great deal easier this year.

Logs from 62 countries were received and 86 different countries appear in the logs! Not a bad weekend to help finish off your RTTY DXCC.

The Russian entries went from 3 last year to 15 entries this year. Dima UT5RP worked very hard to get the word out about the contest through out the Soviet Union. The result, increased activity including 3 separate DXpeditions to 3 Russian Republics that have never been on RTTY before.

Dave, J52US put in a great effort and made a lot of people happy with a new one, although EA8AKQ was able to put in more time and take Africa. HK1LDG Raul holds on to South America, JH1QDB takes the honors for Asia and KX6OI was banging away at the keys to take Oceania making many a happy DXer along the way.

We even had a Mobile entry, with K1CGJ/M. He dropped by recently to show me the set up in his Van. To those who thought he was Maritime, the answer is no, he was in his Van. However he was parked, I hope.

SCORING and LOGS

Once again many of you are not taking the USA and Canada as multipliers, many of the scores have been changed to reflect this. Also many of the DX stations seem to be unfamiliar with the rules and fail to take States and Canadian Provinces as multipliers. Hopefully as the rules get wider distribution this will fix itself. I will make a major effort to get log forms and rules to many Clubs and Associations through out the world this summer. We all could help by sending along a log sheet and a copy of the rules when you send off a RTTY QSL card to a DX station.

It also seems that the word "DUPE SHEET" is not a world wide understood term, something we Americans evidently coined. A Dupe Sheet is an Alpha - Numerical Sort of the contacts you have worked in the contest. You can either Computer "dupe" the log , or do it by paper. Either way I need to see a Duplicate check sheet for each band. I said last year for 50 QSOs and over but I could really live with it for bands with 100 QSOS. I have found I can read through about 100 calls and spot dupes. And PLEASE separate log sheets for EACH Band and an overall SUMMARY sheet.

Single OP

A real battle took place for the top spot world, and when it was over IK5CKL, Piero edged out Barry W3FV for the honors. Piero's 85 additional QSO's were enough to put him ahead of Barry. Not far behind was OK2FD and TI2OY. Barry took 1st place USA and North America as he did last year, and OK2FD took 1st Place Europe. Top Canadian score was VE6CB/3.

Single Bands

The single band entries seemed to draw more attention this year. The only band we did not receive an entry for was 40 meters. A good effort by CE6EZ on 10 with 402 QSOs, HC5EA with 353 QSOs on 20 and VE6ZX with 374 on 15 meters. HB9DCQ made 90 QSOs on 80 meters, many of them stateside.

Multi-OP

Well the gang from the Assoc DX-EX went back to San Cristobal Island in the Galapagos and smashed their own record of last year. This time they did it without any guest ops from the states. They only made 66 more QSOs than last year, but worked many more Zones and countries for a score of 1,771,798. John, TG9VT and Jules W2JGR gave it their best from TG9VT but came in second again, the 1 point QSO difference is to much to overcome. They ended up with 1,047 QSOs. Rumor has it that John is going to try this year as a Single OP! The Gang from India put in a great effort as AT0J, which confused many a stateside OP that couldn't believe they had not worked Kansas!! They had 794 contacts for a final of 814,212 for 3rd place world. Stateside came next with Hal WA7EGA and the Gang from Spokane operating WA7EGA for 4th place world and the crew from UZ9CWA coming in 5th not far behind.

Summary

Once again many thanks for your notes and support. All the certificates are in the mail. As the interest grows each year, there is opportunity to sponsor a Plaque in various categories, perhaps your local club would sponsor one or a group of you. If interested drop me a note. See you in the next one September 23-24, 1989. **de Roy, KT1N** ■

CQ/RTTY JOURNAL 1988 CONTEST WINNERS

TOP SCORES

WORLD ALL BANDS

CALL	SCORE
IK5CKL	535,920
W3FV	520,884
OK2FD	489,940
TI2OY	483,164
HK1LDG	449,294
W2FG	421,174
JH1QDB	358,561
DJ6QT	351,708
SM5FUG	330,630
N6GG	329,256

USA ALL BAND	
W3FV	520,884
W2FG	421,174
N6GG	329,256
WB5HBR	278,460
W8DN	268,074

CANADA ALL BAND	
VE6CB/3	220,651
VE2JR	64,468
VE3JPC	55,536
VE7BTO	19,838
VE7DTA	19,251

WORLD 3.5 MHz	
HB9DCQ	6,120
Y26EH	663

WORLD 14 MHz	
HC5EA	145,935
4M5RY	107,994
EA8RA	104,451
NJ0M	102,674
UA9YE	85,280

WORLD 21 MHz	
VE6ZX	95,893
JA3EVZ	39,897
KB4QZH	33,259
EA8IY	30,600
NX8J	18,323

WORLD 28 MHz	
CE6EZ	143,748
DJ3IW	34,726
HC1DK	30,680
JA4OYI	26,149
JR1IJV	21,087

MULTI-OP	
HD8EX	1,771,798
TG9VT	1,069,362
AT0J	814,212
WA7EGA	714,528
U Z 9 C W A	646,814

PLAQUE WINNERS

WORLD SINGLE OPERATOR: Advanced Electronic Applications, Inc. (AEA). Won By: Piero Giacomelli, IK5CKL.

WORLD MULTI- OPERATOR: Advnaced Electronic Applications, Inc. (AEA). Won by: Assoc DX-EX, Ecuador, HD8EX.

TOP SCORE NORTH AMERICA: HAL Communications Corp. Won by: Barry Gardner, W3FV.

TOP SCORE SOUTH AMERICA: Association DX-EX, Ecuador, S.A. Won by: Raul Gonzalez F., HK1LDG.

TOP SCORE ASIA: Don Busick, K5AAD. Won by: Kunihiko Fujii, JH1QDB.

TOP SCORE EUROPE: HAL Communications Corp. Won by: Karel Karmasin, OK2FD.

TOP SCORE OCEANIA: The RTTY Journal. Won by: Terry Gerdes, KX6OI.

TOP SCORE AFRICA: George Hitz, W1DA and Roy Gould, KT1N. Won by: Juan Jose Laguna Jimenez, EA8AKQ.

The operators at AT0J, relaxing after placing 3rd Worldwide Multi-Op L to R -- VU2NTA, SWL Gita, SWL Radha, VU2JX J.R., VU2LBW & harmonic Anju

HAMFESTS COMING UP

The 10th annual Wilkes-Barre, PA HAMFEST will be held Sunday, July 2nd, 1989. Location is the ICE-A-RAMA Sports Complex on Coal Street, Wilkes-Barre, PA.

The Huntsville HAMFEST 1989 will be held August 19 and 20 at the Von Braun Civic Center, Huntsville, AL.

S A R T G

Scandinavian Amateur Radio Teleprinter Group

19th SARTG WORLD WIDE RTTY CONTEST 1989

We have the great pleasure to invite you to join the 19th World Wide RTTY Contest, run by the Scandinavian Amateur Radio Teleprinter Group. The rules are the same as before, but with the addition of a new classification: Single Operator – Single Band, and the choice of band is up to you.

- **RULES:**

1. Test periods: 0000 – 0800 UTC, Saturday, August 19th,
   1600 – 2400 UTC, Saturday, August 19th,
   0800 – 1600 UTC, Sunday, August 20th.
2. Bands: 3.5 – 7 – 14 – 21 and 28 MHz.
3. Classes: A) Single Operator, All Bands.
   B) Single Operator, Single Band.
   C) Multi Operator, Single TX, All Bands.
   D) SWL Stations.
4. Message: RST and QSO number, starting with 001.
5. QSO Points: QSO with own country – five (5) points, other countries in own continent – ten (10) points, other continent – fifteen (15) points.The same station may be worked once on each band for QSO and multiplier credits.
6. Multipliers: Each country as by the DXCC country list and each call district in Australia, Canada and USA will count as one (1) multiplier on each band.
7. Scoring: Sum of QSO Points x Sum of Multipliers = Total score.
8. SWL's: Use the same rules for scoring, but based on stations and messages copied.
9. Awards: To the top stations in each class, country and district mentioned above, if the number of QSO's is reasonable.
10. Logs: The logs must be received by **October 10th 1989**. The logs to contain: Date/Time UTC, Callsign, Messages sent and received, Points and Multiplier. Use a separate sheet for each band and enclose a summary sheet showing the **SCORING, CLASS, YOUR CALL, NAME** and **ADDRESS**. In case of multi operator stations, the **CALLS** or names of all operators involved.

☐ Your comments will be very much appreciated!
☐ Send logs to:

SARTG Contest Manager,
Bo Ohlsson, SM4CMG
Skulsta 1258
S–710 41 FELLINGSBRO
Sweden ■

1989 ANARTS WORLD-WIDE RTTY CONTEST

The **Australian National Amateur Radio Teleprinter Society** announces their 1989 RTTY contest. This contest is scored according to the same Zone Chart published in the April issue of the *Journal*.

TEST PERIOD:
Saturday, 10 June, 1989, 0000 UTC, to Monday, 12 June 1989, 0000 UTC.

- No more than **30** hours of operating time is permitted for Single Operator stations. Non-operating periods may be taken at any time during the contest.
- Multi-operator stations may operate the entire contest period.
- A Summary of operating times must be submitted with each claimed score.

BANDS:

- **3.5, 7, 14, 21** and **28** Mhz.

MODES:

- All digital modes permitted (RTTY, AMTOR, PKT.).
- **Note:** No satellite operation permitted.

CLASSES:

- **(A)** Single operator (one transmitter).
- **(B)** Multi-operator (one transmitter).
- **(C)** SWL printer.

MESSAGES:

- To consist of: **RST, TIME (UTC), & ZONE.**

SCORING:
Per Zone Chart, multiplied by the number of **countries** worked; multiplied by the number of **continents** worked (max 6). After the above calculations, world stations add 100 points for each **VK** worked on 14 Mhz; 200 points for each **VK** station worked on 21 Mhz; 300 points for each **VK** station worked on 28 Mhz; 400 points for each **VK** station worked on 7 Mhz; and 500 points for each **VK** station worked on 3.5 Mhz.

Example: 720 points from Zone Chart x 29 countries worked, x 5 continents worked = 104,400 points, plus (+) 6 VK stations worked on 14 Mhz (that is 600 points), giving a grand total of 105,000 points.

A station may be worked only once per band, but may be worked on another band for further multipliers.

COUNTRIES:
Country count per ARRL list of countries, except that each VK, JA, VE, VO and W/K districts count as a separate country. Contacts with one's own country count as zero points for multipliers.

LOGS:
Logs must show in this order:

1 - Date
2 - Time (UTC)
3 - Callsign of station worked
4 - Message information sent (RST/TIME/ZONE)
5 - Message information received (RST/TIME/ZONE); and
6 - Points claimed.

SUMMARY REPORT:
Summary sheet must show:

- Callsign of station
- Name and address of operator
- Bands used (a seperate log is required for each band)
- Points claimed for each band
- Number of **VK** stations worked
- Total points claimed; and
- Signature/s.

Multi-operator station logs must contain the signature and callsign of each operator.

CLOSING DATE:
Logs and summary sheet must be received by the Contest Committee by **1 September 1989**. Mail these to:

W.J. Storer
55 Prince Charles Road
FRENCH'S FOREST, N.S.W. 2086
AUSTRALIA

AWARDS:
Awards will be issued for **1st, 2nd** and **3rd** on a World basis, and also on a Country basis.

The judges decisions regarding the standings in the contest shall be FINAL, and no correspondence will be entered into regarding the same. All logs become the property of the Contest Committee upon completion of checking.

Good Luck . . .

de Bill, VK2EG

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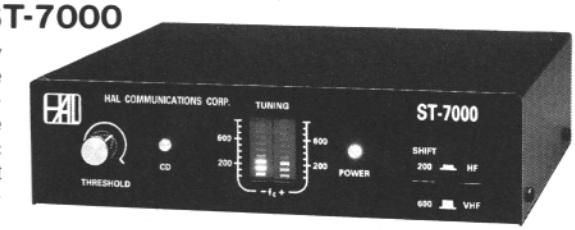
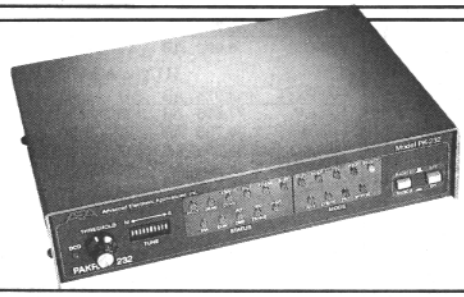
. . .a unique new mobile data printer, includes a packet controller and a 13.6 VDC printer that interfaces with any mobile radio. in a recent user test it proved to have about twice as much audio level range tolerance as other TNCs. It is also an ideal unit for emergency work and a commercial version is perfect for dispatching service, emergency and police vehicles.

HAL Communications' ST-7000

HF-Packet Modem. . .a high performance modem designed specifically for 300 baud HF-Packet. It offers no-compromise performance to assure optimum operation under the most demanding signal conditions. Techniques developed for government and military use are used in the ST-7000. AGC-controlled AM signal processing provides a wide dynamic range. All filters and detectors are optimized for 300 baud HF-Packet. It offers the 200 Hz shift mode and a wider 600 Hz shift mode, each supported by separate 6-pole input filters and a 40 db AGC system.

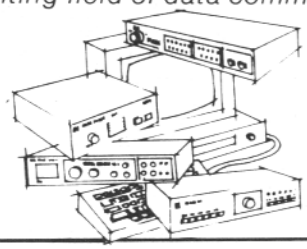




The PK-232 by AEA

. . .the only controller offering Morse Code, Baudot, ASCII, AMTOR, Packet, and facsimile Transmission & Reception plus the ability to monitor the new Navtex marine weather and navigational system. . .7 modes in one controller. The PK-232 makes any RS-232 compatible computer or terminal the complete amateur digital operating position. All decoding, signal processing and protocol software is on ROM. Only a simple terminal program (like those used with telephone modems) is required to interface the PK-232 with your computer. **Watch for the new and exciting AEA FSTV-430. Have fun on amateur TV!**

Obviously, we can fill in a system that you have already started. Or we can furnish a complete system to fit your needs and budget. For example, here's some suggestions for the amateur just entering the exciting field of data communications, or: for the amateur who wants the best available.



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NO. 2. . .top of the line! The HAL ST-8000 or HAL ST-6000 and AEA's PK-232 . . .the winning combination. You can't do better for all-mode, all-band enjoyment of hi-speed data communications.

If you have any questions concerning these units, or would like to discuss your requirements with a knowledgeable specialist, please call and ask for George Sanso, AB6A. We also carry a large selection of excellent commercial products for data communications and emergency systems as well as a complete inventory of amateur equipment and linear power amplifiers.

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CQ/RTTY Journal W/W RTTY Contest

Official Results

NOTE: Number groups after call letters denote the following:
Final Score, (AB = All Band, B = Multi Op), Number of QSO's, Points, Zones, Countries, and State/VE Provinces. Winners are **underlined.**

SINGLE OPERATOR

CALL	SCORE	CL	QSO's	PTS	ZNS	CTYS	US/VE
NORTH AMERICA							
UNITED STATES							
W1AX	125,652	AB	226	566	65	115	42
K1CGJ/M	20,468	AB	91	172	40	41	38
NC1B	11,175	AB	58	149	31	44	0
W1IHN	9,717	AB	51	123	30	38	11
KT1O	3,885	14	46	105	10	15	12
W2FG	421,174	AB	534	1,261	79	164	91
NO2T	120,528	AB	247	558	56	90	70
KC2FD	72,162	14	283	633	24	53	37
W2FCR	8,580	21	53	143	21	32	7
KD2XN	8,520	14	61	142	16	29	15
NA2Q	1,716	AB	24	44	14	14	11
W2KHQ	630	14	15	30	7	8	6
W3FV	520,884	AB	532	1,404	89	188	94
W3GU	128,681	AB	250	593	58	103	56
W3KV	122,683	AB	214	587	64	104	41
N3UN	106,368	AB	217	554	67	94	31
KA3JFI	11,001	28	76	193	18	30	9
KB2VO	194,790	AB	357	755	63	115	80
AB0Y/4	108,108	AB	242	546	48	100	50
WA4SSB	71,012	AB	234	433	43	55	66
AA4JN	64,619	AB	191	361	47	65	67
KI4MI	55,110	AB	150	334	48	78	39
KB4QZH	33,259	21	162	421	20	43	16
WA4F	19,402	AB	95	178	36	42	31
KD4OM	18,236	AB	78	194	30	45	19
W4/DL1BFZ	16,428	14	138	222	15	23	36
WB5HBR	278,460	AB	472	1,020	65	117	91
AA5AU	254,448	AB	398	837	77	128	99
KG5EG	166,618	AB	369	734	54	85	88
KA5YSY	125,640	AB	289	698	47	89	44
WF5E	79,110	14	311	586	29	61	45
KF5YE	76,635	14	263	655	26	64	27
NI5M	26,781	AB	84	237	46	67	0
KE5BK	5,568	21	49	116	11	25	12
N6GG	329,256	AB	432	1,076	75	126	105
K6EID	137,598	AB	276	646	61	99	53
W6JOX	77,220	AB	199	396	54	67	74
W6IWO	38,634	AB	140	282	41	54	42
WA6FIT	28,930	AB	114	263	36	52	22
W6/G0AZT	22,176	14	152	252	23	29	36
W6CN	19,908	14	113	237	18	34	32
NQ6C	13,504	21	105	211	16	24	24
W7MI	103,032	AB	217	477	64	89	63
KE7NF	94,672	AB	288	488	42	57	95
WG7Y	21,420	14	160	255	20	26	38
K9JNB	3,036	AB	28	69	15	22	7
KI7T	1,974	AB	30	42	15	10	22
W7WHY	920	AB	19	40	11	12	0
W8LNK	37,752	AB	130	264	41	59	43
W8JAQ	28,380	AB	101	258	33	63	14
K8CV	22,330	AB	102	203	28	46	36
WB8YJF	20,400	AB	88	240	33	43	9
NX8J	18,323	21	109	251	22	38	13
K9KA	250,274	AB	360	866	78	145	66
N4CC	246,512	AB	381	868	75	138	71
WB9B	11,424	AB	82	119	22	19	55
K9OSH	5,130	AB	38	90	25	23	9
W9CD	2,226	AB	23	53	17	19	6
NT0V	210,372	AB	396	746	69	105	108
K6WZ	199,928	AB	372	746	93	78	97
NJ0M	102,674	14	358	718	29	69	45
KE0KB	81,528	14	337	632	27	57	45
K0BJ	39,485	AB	132	265	45	59	45
KB6IC	25,250	AB	143	250	21	39	41
NG0X	19,186	AB	94	181	33	38	35
K0OST	12,012	AB	76	156	20	27	30
WB0CHS	7,276	AB	55	107	21	29	18
ALASKA							
KL7XD	94,395	AB	251	609	45	59	51
CANADA							
VE2JR	64,468	AB	167	454	39	74	29
VE6CB/3	220,651	AB	345	947	59	115	59
VE3JPC	55,536	AB	142	356	52	66	38
VE3UR	26,400	14	111	300	27	44	17
VE3JAN	14,690	14	89	226	15	31	19
VE6ZX	95,893	21	374	931	20	45	38
VE7BTO	19,838	AB	89	218	29	31	31
VE7DTA	19,251	AB	84	207	30	31	32
VE7VP	14,186	AB	64	173	32	34	16
VE7HDX	4,608	AB	34	96	20	27	1
VE7BDQ	2,795	AB	28	65	15	10	18
COSTA RICA							
TI2OY	483,164	AB	701	1,738	54	118	106
DOMINICAN REPUBLIC							
HI3ADI	263,750	AB	498	1,250	48	91	72
GUATEMALA							
TG9SO	7,738	AB	49	106	26	25	22
PANAMA							
HP1AC	49,680	AB	160	368	37	41	57
HP1KZ	6,048	14	57	126	12	16	20
AFRICA							
CANARY ISLANDS							
EA8AKQ	217,425	AB	334	1,115	47	81	67
EA8RA	104,451	14	315	941	25	46	40
EA8IY	30,600	21	168	510	20	40	0
EA8AZM	6,210	AB	46	138	13	16	16
EA8BOI	1,144	14	18	52	7	10	5
GUINEA-BISSAU							
J52US	96,280	AB	222	664	33	53	59
ASIA							
ASIATIC USSR							
UW9CY	207,584	AB	367	998	52	104	52
UA9YE	85,280	14	291	820	24	43	37
CYPRUS							
5B4MD	23,814	14	205	486	17	32	0
HONG KONG							
VS6UP	218,276	AB	425	1108	54	108	35
INDIA							
AT0S	94,024	AB	213	584	49	96	16
ISRAEL							
4X6KA	143,298	AB	293	838	43	94	34
JAPAN							
JH1QDB	358,561	AB	441	1,267	71	138	74
JR2CFD	231,043	AB	313	899	69	129	59
JA1BWA	211,255	AB	292	835	70	117	66
JA1DFQ	86,154	AB	180	498	51	75	47
JA7AB	62,745	AB	158	445	56	85	0
JA3EVZ	39,897	21	139	403	28	42	29
JA2LA	38,354	AB	106	302	50	61	16
JA2NNF	37,592	AB	106	296	46	61	20
JA6WW	35,160	AB	105	293	40	59	21
JA4OYI	26,149	28	119	331	23	46	10
JL1ARF	25,752	AB	83	232	33	62	16
JR1IJV	21,087	28	104	297	19	32	20
JA8RUZ	7,332	14	63	188	10	25	4
JA7KM	4,387	28	37	107	13	18	10
JA1EUL	4,048	AB	31	92	16	19	9
JA4FCC	972	AB	13	36	12	13	2
JR1AVY	897	28	14	39	9	9	5
JL2XUN	216	21	8	24	3	6	0
KIRGHIZIA							
UM9MWA	64,285	AB	204	559	34	62	19
SOV. BASE CYPRUS							
ZC4JA	207,172	AB	376	1,057	53	108	35
TADZHIKISTAN							
UW3TT/UJ1J	43,945	AB	200	517	26	49	10
EUROPE							
AUSTRIA							
OE3HCS	3,440	AB	31	86	18	19	3
OE1WWL	1,225	28	18	49	11	13	1
BULGARIA							
LZ1KAA	91,428	14	314	802	23	52	39
LZ1XX	6,612	AB	53	114	17	23	18
CZECHOSLOVAKIA							
OK2FD	489,940	AB	537	1,441	85	165	90
OK1MP	14,784	14	67	176	27	48	9
DENMARK							
OZ8RO	17,836	AB	69	182	40	56	2
OZ8AE	3,825	AB	27	75	22	24	5
EAST GERMANY							
Y79XN	72,027	AB	181	477	46	69	36
Y51XJ	13,869	AB	89	207	24	43	0
Y24MB	9,568	AB	75	184	19	33	0
Y26EH	663	3.5	20	39	4	13	0
ENGLAND							
G4SKA	140,958	AB	298	738	49	85	57
G0ARF	87,318	AB	205	539	50	73	39
G4MKO	59,160	AB	130	408	44	60	41
G4UZN	28,438	AB	91	241	38	62	18
EUROPEAN USSR							
UA3AKR	85,920	AB	251	537	45	100	15
UA3TN	54,540	AB	176	404	42	83	10
RA4LM	22,410	AB	109	270	24	54	5
RA3VR	99	21	4	11	3	3	3
FINLAND							
OH2LU	237,783	AB	340	871	73	147	53
OH2BDN	50,958	AB	226	447	29	57	28
OH9SV	47,601	AB	159	387	34	57	32
FRANCE							
F6BVB	80,791	AB	178	467	52	81	40
FF6KRJ	6,090	AB	37	105	23	24	11
HUNGARY							
HA6PX	118,978	AB	247	589	63	113	26
HA5CP	77,805	AB	175	455	57	88	26
HA8XF	76,735	AB	197	515	44	68	37
HA1WD	58,855	AB	146	395	49	65	35
HA0IV	11,304	AB	63	157	29	36	7
HA5AEZ	7,638	28	46	134	21	25	11
HA6NA	5,500	AB	45	110	15	24	11
ITALY							
IK5CKL	535,920	AB	607	1,680	73	139	107
I0VHL	142,410	AB	301	705	51	99	52
IO0KHP	84,150	AB	192	495	48	78	44
I3MIQ	58,164	AB	165	444	41	68	22
I2FKW	31,980	14	160	390	18	40	24
I4IBR	29,812	AB	94	257	40	53	23
I1VTX	1,740	14	20	60	10	16	3
LIECHTENSTEIN							
HB0/HB9NL	114,390	AB	232	615	52	90	44
LUXEMBOURG							
LX2EL	41,584	AB	131	368	31	38	44
MOLDAVIA							
UO5OK	14,280	AB	90	210	21	39	8
NETHERLANDS							
PA3DBS	172,788	AB	305	847	53	80	71
PA0SOL	10,020	AB	68	167	22	28	10
PA0YN	8,905	AB	55	137	23	35	7
POLAND							
SP9BCH	95,284	AB	226	574	43	91	32
SP6AOI	46,917	AB	154	401	35	51	31
SP3SUN	31,648	14	149	368	20	46	20
SP4KM	23,387	AB	88	257	30	37	24
SP3BGD	10,675	14	64	175	21	26	14
SP9AUV	6,336	14	64	144	10	29	5
SP6EIY	5,850	28	42	117	18	26	6
SP3XR	1,288	14	23	56	7	15	1
SP3IBM	42	28	3	7	3	3	0

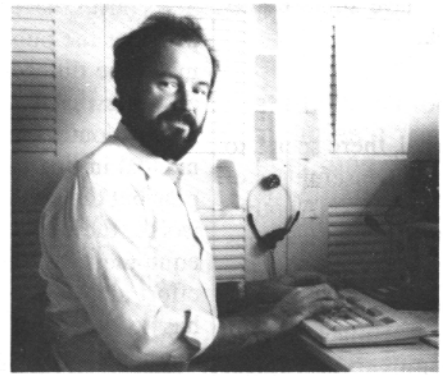
CALL	SCORE	CL	QSO's	PTS	ZNS	CTYS	US/VE
PORTUGAL							
ECT1CKP	5,350	AB	45	107	18	28	4
ROMANIA							
YO3AMC	6,660	14	110	180	16	21	0
YO6JN	4,264	14	68	104	12	29	0
YO2CMI	455	21	15	35	5	8	0
SPAIN							
EA5KFI	216,756	AB	329	892	60	107	76
EA1AW	36,771	AB	115	309	38	48	33
EC3CBD	7,245	14	66	161	12	21	12
EA1YW	2,822	21	32	83	8	13	13
EA3FIM	2,485	AB	31	71	12	19	4
SWEDEN							
SM5FUG	330,630	AB	393	1,070	87	140	82
SM4AAY	74,752	AB	242	584	36	59	33
SM0HTO	40,425	14	143	385	31	64	10
SM7BGE	6,655	AB	53	121	23	29	3
SM6CJY	2,379	AB	23	61	15	20	4
SM0AJU	2,352	14	29	56	16	21	5
SM5PPS	2,277	AB	35	69	14	19	0
SWITZERLAND							
HB9HK	97,495	AB	227	629	38	57	60
HB9FMF	19,548	AB	71	181	39	50	19
HB9DCQ	6,120	3.5	90	180	6	26	2
UKRAINE							
UB0JZ	173,900	AB	387	925	48	106	34
UB0QO	64,774	AB	181	466	41	74	24
WALES							
GW0ANA	48,988	AB	132	331	49	77	22
WEST GERMANY							
DJ6QT	351,708	AB	416	1,106	78	157	83
DJ6JC	273,870	AB	406	1,074	70	112	73
DF3CB	180,960	AB	258	696	81	121	58
DL4CMF	53,613	AB	116	333	55	69	37
DJ3IW	34,726	28	123	358	28	45	24
DF1GW	20,467	AB	77	211	32	35	30
DK7FP/P	20,295	AB	72	205	34	38	27
DJ2YE	13,135	14	73	185	21	40	10
DF5BX	8,970	AB	48	130	25	28	16
DK5KJ	5,940	AB	47	108	21	31	3
YUGOSLAVIA							
YU3EA	232,305	AB	340	911	71	184	0
YU3MJ	13,986	14	94	222	18	45	0
OCEANIA							
AUSTRALIA							
VK2EG	23,144	AB	89	263	36	40	12
VK2EBP	12,540	14	67	190	19	32	15
VK2BQS	9,620	14	63	185	16	24	12
HAWAII							
WH6I	7,869	AB	71	183	9	7	27
INDONESIA							
YB5QZ	82,360	AB	194	568	47	74	24
YC8TR	17,215	21	109	313	14	25	16
YB1BG	8,694	14	57	161	20	17	17
MARSHALL ISLANDS							
KX6OI	135,792	AB	317	943	39	67	38
NEW ZEALAND							
ZL2AKI	54,900	AB	154	450	36	47	39
PHILIPPINES							
DU9LMT	984	AB	16	41	11	13	0
SOUTH AMERICA							
ARGENTINA							
L7D	118,335	AB	265	735	39	64	58
BOLIVIA							
CP6IH	59,136	AB	156	448	38	65	29
BRAZIL							
PY4DA	63,756	AB	170	483	36	55	41
PY2LS	4,346	AB	30	82	23	21	9
CHILE							
CE6EZ	143,748	28	402	1,188	23	57	41
CE6GEE	20,636	14	111	308	18	26	23
CE2CQZ	20,416	AB	83	232	27	38	23
CE3BFZ	17,526	21	87	254	14	29	26

John TG9VT & Jules W2JGR at keyboard →

CALL	SCORE	CL	QSO's	PTS	ZNS	CTYS	US/VE
COLOMBIA							
HK1LDG	449,294	AB	547	1,622	70	104	103
HK4BHA	98,106	AB	204	591	53	84	29
HK4EGW	5,994	AB	39	111	21	15	18
HK1HHX	4,131	14	54	153	9	18	0
HK4FXF	480	AB	9	24	9	6	5
ECUADOR							
HC5EA	145,935	14	353	1,035	30	69	42
HC1DK	30,680	28	163	472	12	26	27
PERU							
OA4BR	9,063	14	60	171	16	19	18
TRINIDAD							
9Y4DG	268,320	AB	365	1,032	55	113	92
URUGUAY							
CX5AE	34,279	14	145	413	19	37	27
VENEZUELA							
4M5RY	107,994	14	299	878	23	63	37

□

"Kuni" JH1QDB at station controls 1st Place Asia - Single Operator Class



W4/DL1BFZ showing us how it is done

MULTI-OPERATOR

CALL	SCORE	CL	QSO's	PTS	ZNS	CTYS	US/VE
NORTH AMERICA							
UNITED STATES							
WA7EGA	714,528	B	889	1,654	92	168	172
WB3FIZ	451,350	B	520	1,275	81	167	106
W8DN	268,074	B	434	954	71	133	77
W0NA	179,860	B	459	782	69	83	78
KT1N	178,068	B	334	836	59	121	33
N0FMR	28,251	B	131	219	37	42	50
KA3DSX	2,204	B	25	58	15	14	9
CANADA							
VE7ZZZ	333,735	B	496	1,171	64	81	140
GUATEMALA							
TG9VT	1,069,362	B	1,047	2,583	87	178	149
AFRICA							
BALEARIC ISLANDS							
EA6MR	284,919	B	485	1,301	47	88	84
ASIA							
ASIATIC USSR							
UZ9CWA	646,814	B	688	1,966	80	178	71
UZ9CZM	1,485	B	18	45	17	16	0
AZERBAIJAN							
UD/UZ3PWX	264,992	B	489	1,352	45	108	43
INDIA							
AT0J	814,212	B	794	2,268	87	187	85
JAPAN							
JH7ZZO	83,631	B	161	457	59	82	42
KAZAKHSTAN							
UL0P/ UZ9FWA	543,170	B	736	1,873	71	166	53
EUROPE							
BULGARIA							
LZ2KIM	629,048	B	676	1,673	78	196	102
LZ1KSP	537,138	B	620	1,566	84	181	78
LZ5Z	497,240	B	600	1,604	81	143	86
CZECHOSLOVAKIA							
OK3RJB	200,836	B	318	851	64	111	61
OK1OFK	92,901	B	205	537	55	77	41
OK1KSL	55,522	B	142	391	49	64	29
OK3KII	44,974	B	157	398	31	65	17
OK3KSK	1,302	B	16	42	13	14	4
ENGLAND							
G0CWC/A	52,164	B	175	414	36	60	30
KALININGRAD							
UZ3AYR	323,076	B	518	1,308	59	131	57
UZ3DWH	175,026	B	371	941	44	92	50
NORWAY							
A3T	120,139	B	246	629	56	92	43
POLAND							
SP1PBW	91,182	B	198	546	51	66	50
SP3PLD	23,500	B	95	235	33	52	15
SP9KJM	10,653	B	75	159	20	44	3
YUGOSLAVIA							
YU4EZC	45,384	B	138	372	28	49	45
SOUTH AMERICA							
ARGENTINA							
LR1V	157,400	B	307	787	42	90	68
GALAPAGOS ISLANDS							
HD8EX	1,771,798	B	1,288	3,794	96	195	176

□

CHECKLOGS:

Our thanks to the following stations who sent in checklogs:

KP4BJD LZ1DB LA7SP LA4ND SM5APS W4UW OD5NG F11ADB WA6IEL KL7VZ DE0GMH F11ADT SM6APB and EC4CTB

Cole Ellsworth, W6OXP
10461 Dewey Dr.
Garden Grove, CA.
92640

CONNECTIONS

The poet claims April Showers bring May Flowers. This may be true elsewhere but not in Southern California where April had a record breaking heat wave and no rain worth mentioning. And the way my hay fever is acting up, I can do without the May Flowers.

MAIL

Old Timer Orlo Hudson W5LVA, PO Box 968, New Strawn KS 66839-0968. Tel (316) 364-8635, is in dire need of a CP/M terminal program for his CP/M Operating System computer. Orlo needs a printout of either the Assembler Source Code or as a last resort, a Hex dump of the terminal program. He says he has to enter it into his machine by hand since his disk format is unusual. A BASIC program would also be acceptable. Now here is a fellow who obviously will go to great lengths and mucho hard labor to get his computer working with a terminal program so he can talk to his RTTY or Packet controller. Please write him if you can help. Orlo says this is his first effort to operate something other than the voice mode. Please don't let him get discouraged due to lack of response from you computer types that have some CP/M terminal programs lying around the shack.

MORE ON MANUALS

As discussed in recent issues of the Journal, there seems to be an ongoing problem with the intelligibility/usefulness of commercial equipment manuals or user's guides. Another reader reports similar problems. W6WFE, Floyd who has been licensed since 1934 (54 years) is a big AMTOR fan. He has a PK-232 and has problems with the manual similar to those reported by others. Floyd mentions that unless you are already experienced in digital communications, these manuals leave you out in left field. I am sure that Floyd knows from reading recent issues that he is not alone. What is a good way to get some background to understand what is going on in order make use of the equipment manuals?

Floyd asks if there are other books that do a better job of explaining the digital modes and digital operation. Well, I still have not seen the manual for the HK-232 from Heath but hope to do so soon. Reports have it that it does a better job than most of explaining the situation. Then I believe there are several books advertised in the radio publications on digital modes, packet and amtor in particular. Can anyone recommend their favorite publications in this regard?

If you really want to understand digital electronics, the Heath digital electronics course does a fine job at reasonable cost. This can be taken on your own schedule and a test is provided if you want to take it. If you are a Ham, then you already have the background to breeze through the course and it will make some of the terms and language bandied about by digital types much more understandable. However, if you really do a lot of reading of technical publications from Ham radio, trade journals, popular electronics magazines, etc, you can pick up an amazing amount of information that soon starts to make sense. Don't be shy just because you only understand 25% at first. After you get your feet wet, it gets easier and become really fascinating. Or should if you have any curiosity at all. Soon you will be understanding 50% and then 75%. If you get so you can understand more than about 90-95% let me know how you do it! Don't try to tell me you don't have the time to read unless you have to work 16-18 hours a day. Just pull the plug on the TV set and forgo an hour or two of rag-chewing. This is not to say that you folks do not have a legitimate complaint, because I think you do.

On the other hand, writing a comprehensive and lucid manual on something like a multi-mode controller that has six or seven communications modes is no small undertaking. In this regard that old boogie "Time" causes problems. Ideally, after the first draft of the manual is written it should be "Beta Read", to coin a term, by people who are the targeted users (the customer) but who have only general knowledge of the subject. These Beta Testers should not be Engineers, Designers or other technical types. These reviewers should read the manual and note where descriptions are unclear, where set up and operating procedures seem confusing, mark terms that are not defined, and the like. Such a method provides the publisher with very valuable feedback and can make the difference between a manual that helps the user and one that confuses the user. Of course this is where "Time" comes into play. It takes quite some time to review a manual in this manner; meanwhile the product is not shipping but the publishers expenses continue. To make matters worse, the rapid introduction of new and more advanced equipment by the competition makes the documentation effort almost hopeless. I am sorry to be so negative but one has to be realistic. For me, the only solution is to keep reading everything I can get my hands on. Even then, there is no way I can keep up with the ever greater flood of information spewing forth from the world's presses, so one does have to be selective in subject material.

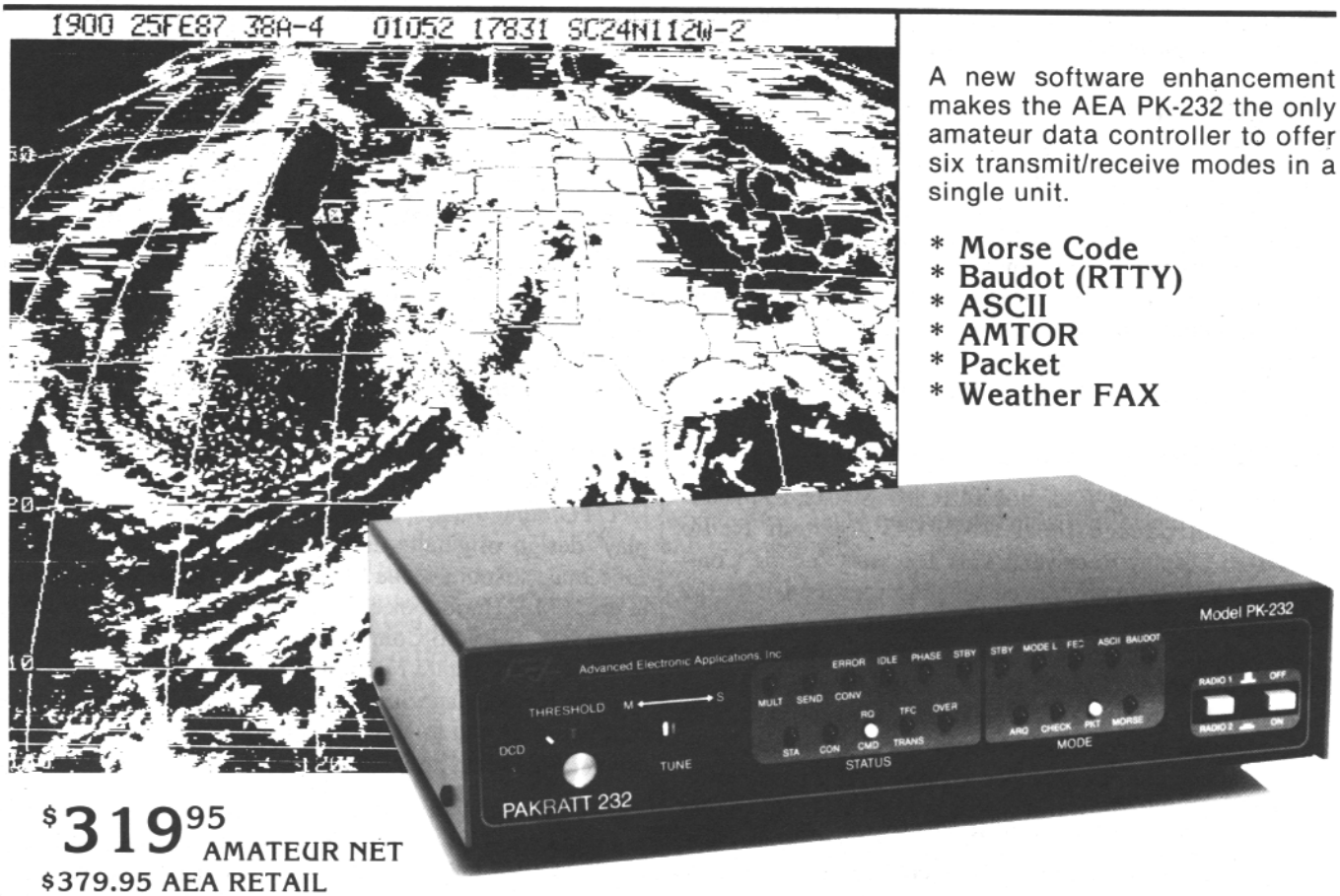
Thanks for writing to us, Floyd. I hope someone out there can recommend a good "digital background" book for you.

While we are on the subject of User's Manuals, lets hit a positive note and recognize an excellent effort in documentation by Kantronics. Dale recently lent me copies of the new Kantronics Installation Manual, Operations Manual, and Command Manual. These three plastic-finger-edge bound manuals cover the KAM, KPC-4, KPC-2400, KPC-2, and KPC-1 communications controllers. Each manual contains from 55 to 65 pages including a table of contents AND

Continued on page 16

New PK-232 Breakthrough

Six Digital Modes - Including Weather FAX



A new software enhancement makes the AEA PK-232 the only amateur data controller to offer six transmit/receive modes in a single unit.

* **Morse Code**
* **Baudot (RTTY)**
* **ASCII**
* **AMTOR**
* **Packet**
* **Weather FAX**

$319.95 AMATEUR NET
$379.95 AEA RETAIL

Your home computer (or even a simple terminal) can be used for radio data communication in six different modes. Any RS-232 compatible computer or terminal can be connected directly to the PK-232, which interfaces with your transceiver. The only program needed is a simple terminal program, like those used with telephone modems, allowing the computer to be used as a data terminal. All signal processing, protocol, and decoding software is in ROM in the PK-232.

The PK-232 also includes a no compromise VHF/HF/CW modem with an eight pole bandpass filter, four pole discriminator, and 5 pole post detection low pass filter. Experienced HF Packeteers are reporting the PK-232 to have the best Packet modem available.

Operation of the PK-232 is a breeze, with twenty-one front panel indicators for constant status and mode indication. The 240 page manual includes a "quick start" section for easy connection and complete documentation including schematics. Two identical back panel radio ports mean either your VHF or HF radio can be selected with a front panel switch. Other back panel connections include external modem disconnect, FSK and Scope Outputs, CW keying jacks, and RS-232 terminal interface.

The RS-232 connector is also used for attaching any Epson graphics compatible parallel printer for printing Weather Fax. Weather maps and satellite photos, like the one in this ad, can be printed in your shack.

Contact your local AEA dealer today for more information about the one unit that gives you six modes for one low price, the PK-232.

AEA Brings you the Breakthrough

2006-196th St. SW
Lynnwood, WA 98036
(206) 775-7373

CONNECTIONS Continued from page 14

BELIEVE IT OR NOT, A SIX PAGE INDEX! The index is somewhat unique in that it is the same for each manual and has a reference as to which manual the indexed item can be found. I am pleased to see that, after two years of harping on the lack of an index in a manual, a manufacturer finally "did it right". (Oh sure, the guy who wrote the manual probably never read this column but I am going to exercise a journalist's prerogative and claim credit - it makes me feel good inside!) These three manuals look good to me, but the final test is what the equipment user thinks of the documentation. How about it, you Kantronics owners that have these manuals? Were they easy to read, did they tell you what you wanted to know, did they help you solve problems? Write and let us know how they worked for you. All comments, good, bad, or indifferent are welcomed.

NEW PRODUCT ANNOUNCEMENT

Mauro Engineering, P.O. Box 1450, Mt. Shasta, CA 96067 has just introduced the AMSPEC-3 Amateur Radio Spectrum Display Receiver. This accessory for the Commodore C64/128 computers comes pre-programmed for the H.F. amateur bands, 160 through 10 meters. The AMSPEC-3 displays 250 kHz segments of the selected band on the computer screen. General coverage of 1.8 to 30 MHz, at display widths from 25 kHz to 300 kHz, is also available from an additional mode selected from the main menu. For operation on other frequencies, such as VHF 2 meter satellite use, a suitable converter with a 14 to 30 MHz I.F. output can be plugged into the AMSPEC-3 receiver input. The broad-banded input allows direct connection to suitable antennas or through an appropriate adapter to the station transceiver. In addition, a frequency counter input allows connection to the transceiver VFO and when locked on, causes a pointer to move across the screen as the dial is moved, indicating where you are tuned on the band. Featuring a dynamic range of 60 db (S1 to S9 + 24 db) and better than 1 microvolt sensitivity, the AMSPEC-3 plugs into the C64 user port and comes with all operating software on 5 1/4" disk. The unit measures just 1.25" high by 9" wide by 4.5" deep. An IBM PC compatible unit will be available later this year. Price is $195.00 Power requirements are 16-18 VAC at 250 ma. A plug-in transformer is available for $10.00.

I have seen the manual and screen dumps of the display and it all looks very professional and well done. I have always had a fascination with panadaptors, spectrum displays, and the like and am looking forward to reviewing the IBM PC unit when it is released. If someone out there gets the C64 version, after the newness wears off, let us know how it worked for you. Dale would appreciate a written review for publication if you can stir up the ambition a bit.

TUNING SCOPE FOR MFJ 1278

After reviewing the schematic for the MFJ 1278, I note that it is a more or less "filterless" system that relies on a phase lock loop detection arrangement. Therefore, there is no easy way to connect a scope directly to the unit because there is no "separated" audio to feed to the scope vertical and horizontal deflection amplifiers which must be done to get a "cross" display.

However, Bruce Meyer W0HZR comes to our rescue by mentioning in a recent note that the "wheel" has already been invented. To quote directly from Bruce: "I can understand K5GJ's desire for a tuning scope as I have found it to be much more revealing of signal quality than is a LED bargraph."

"What most hams do not realize is that the "plus-sign" type of scope display, which has the vertical amplifier connected to the marking filter, and the horizontal amplifier connected to the spacing filter, has no more value than a bargraph display. There is another scope design that shows not only correct tuning, but also the amount of frequency shift and selective fading being received. In addition, it connects directly to the loudspeaker wires and requires no connections to the interface/TU/demodulator internal circuits. This is the "X-display" design originally described in RTTY in November, 1954, but also found in the 1956 May edition of CQ Magazine, in the RTTY Handbook edited by Byron Kretzman W2JTP, in the RSGB Radio Communications Handbook, and most recently, a solid state revision in the September, 1988 issue of Ham Radio Magazine. I urge you readers to investigate the X-display and to compare its characteristics to those of other CRT tuning indicators."

Just as soon as I had read Bruce's note, I recalled the circuit as I had built it into a W2JAV demodulator that I had built way back then and later sold. Bruce modestly refrains from mentioning that he was the designer of this circuit and that the circuit is also known as the "W0HZR X-display". So to Tom K5GJ, I urge you to get the September 1988 issue of Ham Radio Magazine and build the solid state version of the W0HZR X-display and then fire up that graphic marvel, the MAC, and let us know how it all worked out. And a great big THANK YOU to Bruce for refreshing my memory!

One of the reasons the W0HZR circuit provides more useful signal information than does the usual cross-display systems is that the cross-display systems display a signal that in many instances has been very heavily limited in the front end of the demodulator and then filtered by the channel filters before it reaches the scope. If the filters are really sharp, improperly tuned signals show up as a shorter arm of the cross display and it does have to be mistuned quite a lot to cause this. Whereas the W0HZR system utilizes the phase shift across a reactive element to achieve the cross display. This method is quite sensitive to mistuned signals and as the audio has not been limited, selective fading of incoming signals is easily seen.

Continued on page 20

DXER OF THE MONTH

Luciano Fusari
Via Pier Capponi 5450132
Florence ITALY

I5FLN

I got license in 1968 when I was a Lt. of Italian Air Force and I have been always interested on data transmission techniques but at the beginning I prefer the mike. I saw first time RTTY on Nov. 4, 1966 during the famous Arno river flood, in that occasion I have been in the radio world and meet personally I1ORS, I1CQD, I1KG, (last three are now silent key). Later in 1968 Gus, I1WT taught me how to operate with the TG7 machine but for me were too much noise hi... and so I were used to help Gus during some of the RTTY contest.

I started then to build the first RTTY demodulator (ST-6) and a solid state keyboard using a surplus one. Than I buy an Info Tech M300 keyboard and I enjoyed always more and more this mode. I have built several equipments and just forgiving you an idea, some of that has been: ST5 Terminal Unit, MFJ Terminal Unit, Dovetron Terminal, Keyboard for only Baudot, ST6 Terminal Unit mono shift, TV camera and monitor for SSTV, RX and TX solid state (see Ham Radio Oct. 75), 2 Amplifier using 8122 by RCA on grounded grid

DX awards earned

WAS	Phone	# 22295	Nov 5, 71
CQWAZ	2XSSB	# 966	Jan 22, 72
DXCC	Phone	# 6635	Aug 13, 73
			(333 credited today)
5BDXCC	Phone	# 277	Aug 13, 73
DXCC	Mixed	# 24370	Jun 15, 83
RTTY	DXCC	# 45	Sep 83
			(RTTY Journal)
DXCC	RTTY	# 106	Jul 3, 85
			(270 credited today)
WAZ	RTTY	# 2	Oct 26, 87
			(20 meter single band)
WAZ	RTTY	# 1	Feb 6, 88
			(15 meter single band)
WAZ	RTTY	# 2	Oct 17, 88
			(10 meter single band)

I have completed also the 5BWAZ on SSB and have got all cards but till now I have not submitted any request since is necessary time free to do that and now propagation is fine and is better listen on the air.

Actual gear is as follows

Tranceivers
TS-440 AT for HF (Sandra gift)– TR7'S (2) for HF– TS-780 for VHF/UHF

Amplifier
TL-922– T-425 Titan

Antenna Matching
MN-2000– MN-2700

Terminal Unit
TONO 9000E– PK-232– TE-315 Olivetti

Computers
M10 Olivetti– Apple IIE

Antennas
TH3-MK3– TH6DX– 2el Mono 40 meter– Slooper dipoles 40/80 meter– 9 el Yagi VHF 20 el Yagi UHF

I will be 42 on May 18th, I'm married with Sandra since 1st Dec 73. Sandra got her license in 87 and her call is IK5HGV.We have two children, Luigi our son which is 10 year old and Francesca who is 12 year old.

Recently, on August 88 at our beach house in Forte del Marmi we had a visit of a very little dog only 20 days old left during the night on our grass. Millie is the name and is the best found dog we ever see. She like very much DX activity since frequently is on my legs during pile-ups hi..hi..

As you can see from the photo that I enclose the entire family has been already published on the cover of an old RTTY Journal Oct 80, you can see the two kids are very little. Luigi on Sandra legs is only 13 months old. Sandra is a Doctor of Biology and I have been earlier in the Italian Air Force employed as an Inspector Government in an electronic company. The same company where I am now employed as Program Mgr. I resigned the Air Force when I was Captain's degree and recently on Dec 88 I got at home the Major degree.

What more about me? .. really don't know, it is difficult to talk about ourself; I found is better to talk about another one hi... probably much easier.

Luciano, I5FLN - Sandra, IK5HGV - and Francesca. Luigi was not present for picture

By the way I am waiting an answer from ARRL DXCC desk where I sent them another 11 cards. So totals worked on RTTY mode are today 291. Credited should be 280 and card not received are 5. CIAO

de Luciano, I5FLN ■

Eddie Schneider
W6/G0AZT
1826 Van Ness
San Pablo, Ca. 94806

AMTOR

Goodness me, how time flies when you are having fun. I just realized that I first wrote an article for publication in the Journal, in April of last year!

Hopefully, at least one of my "epistles" has helped someone, somewhere to get better acquainted with the wonders of AMTOR. As any scribe will tell you, it is extremely difficult to write about a specific subject for eight issues, and still have more in the pipeline, without becoming repetitive or just plain boring.

MAILBOX

Empty.

With this in mind, and the Editor's permission, I will also include some Baudot bits and pieces in my column. If Dale does not agree, I think this will be the shortest article in the history of the RTTY Journal. So here we go.

With all the "choice" DXpeditions coming up in the near future, maybe I ought to start, with a few hints on how to make working the DX station a bit easier, both for you and the DX operator. Having been on the receiving end of a RTTY pile-up twice, with the possibility of a third one, from another "needed" country in the near future, I have had a little experience of what I think, the average DX station, working contest style, would like to see on his monitor screen. However, I do not have the God given right to make demands, only suggestions.

Normally, the rare DX will probably work contest style, giving you a report and a 73, to try and work as many stations as possible. He will either run "split" to enable the caller to have a chance of seeing his call come up and know that the "599" was for him or in some cases, if the pile up is not too heavy and the DX station has plenty of power and a good beam, the DX may elect to run simplex, the choice is his.

The MOST frustrating thing a DX station has to put up with, in a RTTY pile up, is that nasty string of RYRYs. WHY send RYRY?? What useful purpose does it serve? In the time it takes to send a line of RYs, you could have sent your callsign three, four or even five times, depending on it's length. (Oh you lucky people with lx2 or 2x1 calls). In the days of "real" steam RTTY mechanical teleprinters, the RY was sent to enable the listening station to tune-in, but with modern day TNCs, the fated RY is no longer needed, believe me! Even an in-experienced newcomer to Baudot can tune to a RTTY signal without much trouble, just by watching the LEDs or whatever means his TNC has, of indicating Mark and Space tones. Even stations that still use mechanical teleprinters, because they like the noise and smell of lubricating oil, now use modern day technology, to decipher Mark and Space.

There are some occasions when a few RYs are needed to enable the listening station to "tune" you in. For instance, if the signal has lot of Polar flutter making INITIAL contact difficult. Then by all means send a half line of RY, or at most, one full line. Once contact has been established, unless there is severe drifting, the RYs, once again, becomes obsolete and non-informative.

Thought of the moment:

When you call a DX station in CW, do you send a string of Vees before you send your call?? In SSB do you shout, Ola Ola, Hello! Hello! or whistle into the microphone??. Maybe, but don't call me, I will call you! Let's make a belated New Year's resolution and banish the RYRY syndrome to a "black- hole" in deepest outer space, where it belongs!!

Okay, you come across a big pile up, spread all over the band. You find the DX stations's transmit frequency, great, "I need that one!". So without waiting to see what the DX's "modis operande" is, you call him on his own frequency. Oops, your first big mistake! The inevitable "policeman" comes on, 20db stronger than the DX, calls you a jerk, dummy, lid or whatever and then goes into great lengths to tell you, that the DX is listening UP. Fear not, you are not alone. Confession time! In my inexperienced "youth", I did the exact same thing, only when the "policeman" said "Up", I typed back, "Up what?? Wow, did I feel stupid.

POLICEMEN

(Bobbies)

If someone wants to be a "policeman", please try to assist rather than disrupt! There is no need to be abusive, rather be constructive and helpful. Nobody is perfect, least of all me (!), so if some poor guy hits the wrong VFO or has not realized that the DX is working split, all you really have to do is type: Up 090-095 or whatever. Short, sweet and to the point.

It should be fairly obvious, at least on 20 meters and if you watch your monitor, to tell whether the DX is working simplex or duplex. Think about it. If you do not see much activity other than the DX's replies to other stations, it should not take too high an IQ to realize that this is a two VFO job.

By now, you should have realized that the DX is operating split, probably listening up, so how do you find out where he is listening? If the DX station has his act together, he should make it known to one and all, where he is listening, be it up 5 Khz or spread out all over the band. I blame some of the DX operators for creating their own worst enemy. It is fairly

easy and takes up little extra time, just to type: UP 090-095, after each contact. That way, the "policeman" will be made redundant and we would ALL know where to go, providing we look at our monitor screens occasionally!

Once you have found out that the DX is listening say, .090-095 up, try and work out the operator's operating habits. Check if he answers "tail-enders" or if he moves his VFO after each contact. If the latter, try to find a clear frequency (you'll be lucky!), and just sit there. The DX is bound to find you before the band folds, or he has to QRT for a "call of nature"! Occasionally check YOUR transmit frequency, to make sure that some "big gun" is not wiping you out. If there is, move up or down a few hundred cycles. Common sense really.

If the DX is listening over a fairly large range of frequencies, don't send RYs. I can virtually guarantee that he will pass you by, in preference for a CALLSIGN that makes some sense to him

Pretend that YOU are the DX station, (don't you wish!). What would you rather see on your screen, your call five times then his call once or twice? Doubtful! You know YOUR call, it is probably etched in stone and positioned right in front of your rig. What you WOULD like to see, is the caller's callsign about three or four times. That is IT, end, finito, kaput. Have a listen on CW or SSB, it is very rare to hear someone give the DX station's call, then his own, if he is trying to get through the pile; so why do it on RTTY?

Congratulations. You have made it through the pile-up. If the DX is operating contest style, he is probably only interested in your callsign and a report. Drop your name in once or twice just to be friendly and possibly your State abbreviation, just in case the DX is working for RTTY WAS, and a "thanks for the new one", but please don't make a meal of it. Forget about the city, county, WX, what you had for lunch and station equipment etc. Even if you know the DX operator personally, let HIM decide whether he wants to have a QSO with you, rather than just a contact. Don't forget that there are probably many more stations, who would like to be "in the log", so please, have a thought for those waiting anxiously on the side.

SK SK SK

Reports are exchanged and the DX signs with, SK. If the contact was solid, don't go back for a "super" final. In my book, SK means "end of work or transmission to a particular callsign". In plain English, "I've finished with you, thanks very much, but don't transmit again because I want to work someone else". If the DX sends SK and QRZ after working you and you still go back to him, that really is taboo and inconsiderate operating.

KN KN KN

Frustration item number two, occurs when the DX calls for a certain call area, country or callsign, ending the transmission with KN, and nearly everyone, except the station the DX wants, starts to call again. In the little black book, KN means "invitation to transmit, NAMED STATION ONLY", so please respect the DX station's wishes and give him a chance to work whoever he specifically called. Of course more problems occur, if the DX answers the non-specified called. That opens the flood gates so the DX has only himself/herself to blame. In that instance, no sympathy from me, when his screen in covered with hyrogliphics!

SIMPLEX

If the DX decides to run simplex, you had better watch your monitor very closely indeed. A good DX operator, will drop your call in at the END of his transmission, with a couple of KNs for good measure. This should make it quite clear to the rest of the pile up, that the DX is answering you and only you. Be ready with your finger on the transmit button, otherwise some eager beaver will jump in and mess things up for you.

Don't "break" while the exchanges are being made. It only causes confusion and really slows thing down for one and all. Wait for the DX to call QRZ. Once again, some of the DX operators make it hard work for themselves. They do not make it clear enough to the multitude listening, that they have finished one contact and are listening for the next lucky person.

Let us all try and prove to the DX operator and to future DX- pedition organizers, that RTTY operators are a better bunch than they would ever get on SSB or CW. With that in mind, we may be able to convince more DX-peditioners to take RTTY gear along with them. Despite the fact that their QSO rate will slowdown considerably, they will make a lot of RTTY DXers very happy. See you all in the pile-ups

STOP PRESS

St. Paul Is. DXpedition??

AA5AU Don, possibly VE3JPC Jim, Anon and I, would like to put CY0 (ST Paul Is.) on RTTY and other modes, in late July this year. Do YOU need it?? The logistics for this kind of operation, (read page 14 March 1989 QST), are considerable. To date, there is no RTTY organization that we can turn to for sponsorship or financial donations. Therefore, we appeal with "cap in Hand", to RTTY DXers worldwide, for their assistance. Please send your donation, large or small, to the me at my address listed above, marking the Envelope: CY0:. Donations WILL be returned, if the proposed plans do not materialize.

THANKS in advance, **de Eddie Schneider, W6/G0AZT** ■

Jay Townsend, WS7I
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MINIPROP 3.0

Reviewed by Jay W. Townsend, WS7I

Sheldon Shallon, W6EL (the author and distributor of the latest version of MINIPROP his propagation software) somehow must of figured that RTTY Journal Editor Dale Sinner was about ready to add software reviews to the RTTY Journal. For an original disk and manual made its way via the post into my hands.

WHAT GIVES ME THE RIGHT TO REVIEW!

First just a brief introduction of the reviewer, and then on to the first in a continuing series of software reviews. I am presently in charge of the Micro Computer department for a Life Insurance Company serving the western 16 states and much of the Pacific rim. I cut my teeth on Imsai, Cromemco, Compupro and finally IMB PC computers. The operating systems were CP/M, Cromix, Unix, and DOS. Languages learned, used and some forgotten included, Basic, Cobol, Assembler, and finally Pascal. I write, evaluate, buy, install and support software . . .. .and now will attempt to review it for YOU the RTTY Journal reader.

W6EL's software arrived in the evening mail and like all other software that I get my paws on, immediately it found itself in a directory on my hard disk. The computer here at home is a Clone with a 8088 running at 8 or 9 Mhz, standard old amber monitor, a couple of floppies and a 20 Megabyte hard disk.

There have been a bunch of software reviews on the Miniprop software and I wondered just what I could find that would be a bit different and serve you the reader. First, the Miniprop software has a GREAT manual. Following all the columns in the various DX publications, I have a basic understanding of how propagation works, and living at 49 degrees North, I understand, as seen in the last BARTG contest just what happens when the propagation doesn't favor our part of the world. The section in the manual of 5 or 6 pages and the references noted there helped fill in my meager background.

Speed of the program seems to be stressed in many people's minds, however, I found a solution to the lack of speed and math processor shortage here in the shack. I just go upstairs and grab a cup of coffee. If I was gonna run a bunch of printouts for a DXpedition I would take it to work and put it on the Everex Computer and use my 80287 math co-processor.

Miniprop works quite well and I found only two things to wonder about. The program corrects for antenna gains and is quite neat in being able to change the overall system gain (or loss). This is quite a feature I think. But I must admit the part on angle of radiation, which allows you to adjust for different angles of antennas seems most important, but very poorly explained. It allows adjustment from 1.5 degrees to 45 degrees but has the standard at 1.5 degrees which if I understand it correctly is a bit absurd to say the least. Guess I will have to get clarification from W6EL software on that and let you know.

The other part of the propagation forecast that I found most important to me, but alas not covered was the effect of the K index. Most importantly for me, as a contester(who has almost all the tough polar zones to go through) was a way to quickly modify the input during the geomagnetic problems that we have to deal with here in the northlands. But again this may be a problem that most don't care about, or I could simply not understand how to set it up.

Until next time, compute easy. And I am looking for more programs to review. Just got one from John TG9VT a BARTG logging program. Also have a HAL RTTY program that I am looking at and expect that Dale will have others in the works for me. Just installed a new Windows 386 bunch of software at work, and knee deep in desk top publishing. Let me know if you have any questions or want any qualified answers. Looking for Turbo Pascal Rtty source code (Turbo 5 ??).

de Jay, WS7I ■

CONNECTIONS Continued from page 16

DAYTON HAMVENTION

I was, to say the least, very properly impressed by my first look at the Dayton Hamvention. Adjectives include Huge, Stupendous, Fantastic, A Ham's Dream. The filled-to-capacity RTTY Banquet was really great what with a delicious Prime Rib dinner, Vic Poor W5SMM and his very fascinating description of the APlink Amtor/Packet linking system, and the wonderful fellowship. And then there was our esteemed publisher's induction into a certain ancient and honorable secret society!

After the Hamvention, Dale and I had the pleasure of touring the Hal Communications facility in Urbana Illinois. My heartfelt thanks to Bill Henry and his wife Kathy and all the crew at Hal Communications for being such great hosts. It was a very interesting and informative tour and one that I shall long remember.

Next issue will be a combined June/July issue of the Journal and more items of interest for all you fine folks out there.

Until then, Very 73 **de Cole W6OXP** ■

Richard Polivka, N6NKO
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PACKET

STAND AND DELIVER

Starting in 1981, there was a gentleman from Bolivia who was working for a large firm and getting paid good money. He eventually left the firm, the good money and all of that to become a teacher. Now you may be saying that he was crazy to do this, but, he did it because he wanted to teach. He was commissioned to teach students about computers in high school. Wellll.....

Instead he ended up teaching them math. He later decided that it was not good enough and persuaded the school to let him teach the students Calculus. Well, despite the odds (Barrio kids in a Barrio school, etc.) he managed to get them to pass the College placement test for Calculus. He had the will and desire to teach them even though his peers said that it could not be done. His name is Jaime Escalante and he was later given the title of best teacher in America. He received this title because he believed in what he was doing.

Can we believe in what we are doing? Well, it is apparent that most people don't. Amateur Radio is not growing fast enough to satisfy some people, so, there will be a no-code license pretty soon. I am for it and against it, depending on the day and which way the wind is blowing. I am against it because it removes a false psychological boundary called Morse Code. Theory is easy but code is the "Great Equalizer". Mr. Escalante mentioned to his students that people will judge you by the color of your skin and your name and he called math the "Great Equalizer". He who has the best fist will usually win in a CW pileup. On the other hand, I see No Code as a way to get more people into Ham radio by letting them use what they are interested in which is Packet radio in many instances. There are other ideas that I could expound on but this is a column on Packet Radio and they don't apply.

MAIL

From my mail section. The first letter is from Don, VK3YZW in Australia. He has a Sanyo MBC 550 computer and is looking for a communications card for the unit. If you can help him out with a card or where he may be able to procure one, you can reach Don at VK3YZW @ VK3YZW.

I received an interesting note from Tom, KA9TOQ. Thanks for the comments on my "store and forward" section. He also mentioned that I should mention some ideas on how to operate Packet for Field Day. Well, what I say here and what will be used are about as separate as East and West. I can sit here and get hot under the collar and frustrated to boot at people and how they operate but life would be so much easier on VHF Packet during Field Day if, and I mean "IF", people would use the same timing parameters, and I mean the normal accepted values. This way everyone would get a fair shot at the channel. There is really no skill to Packet on Field Day. You either get the connect or you do not. The channel can only support so much at once. So, how does that statement go? "All men are created equal and some are more equal than others". So, in order to get an advantage over one's competitor teams have set their timing to channel hogging levels and run POWER. I remember hearing by word of mouth that one team on top of mountain in the local area was running a 160 watt linear. Must be nice and I am sure that there will be more people out there this year doing that same thing. I believe in a FAIR contest and most people see a fair contest in which they win and not someone else. Me, I stay out of it. It is too much of a jungle when the animals get out there. I would rather go after rare RTTY DX on 10 meters when it is marginal at best. Now that is a challenge for an operator and his equipment.

I guess what I am trying to say Tom is that be true to yourself and don't change the timing settings in your TNC from what you normally use. Fight a good fight and keep it honest. And that applies to all, don't be channel PIGS

Speaking of the animals that are accused of wallowing in the sty, Tim, WA3INX in Pittsburgh, Pa. remarked that he liked the description of the cartoon about the "ham" operator. Well, I have seen too many hams that could fit the description INCONSIDERATE. Oh, well, anyway thanks again for the comment and Tim can be reached at the W2XO BBS in Pittsburgh, Pa.

NEW CPU

I may be getting a new computer here soon. It is in the planning stages and I am looking at obtaining an XT compatible computer. That way, this station can be on as a TCP/IP BBS and with AX.25 capabilities thrown in. I will let you know of my progress and will also give out my IP address when I get it going. It's getting interesting here at the Owl's nest.

DAYTON

Well, the Dayton Hamfest is now over. I wish that I had been there but alas, somebody has to work to pay the bills. From what I hear from my wags, it was a great success. It appears that the digital modes are taking off in appeal so maybe we will get more people out there banging on the keys, green and other colors. NOW to get them to do things properly so that we can all co-exist on what frequencies we do have available

Continued on page 22

Betsy Townsend, WV7Y
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Spokane, WA 99210

AWARDS

MULTIPLE CALLS, MULTIPLE AWARDS

Eddie Schneider, W6/G0AZT (our AMTOR columnist) is a busy fellow wherever he travels and he has the wallpaper to prove it. Under his home call G0AZT, Eddie has a RTTY DXCC. As W6/G0AZT he has recently received our WAC award and received a second WAC award for VP5/G0AZT. Eddie receives awards as often as Jay and I change our calls. Congratulations Eddie!

KUDOS to W6JOX

Charles Prindle from Santa Rosa, California. He recently received our RTTY WAZ award, an exceptional feat. Charles is the first U.S. operator to win this award!

SUPREME DXPEDITION DJ6JC

Heinrich Lumpe, operated from Abu Ali Islands (A15) February 1988, offering RTTY DX for the hungry among us. The RTTY JOURNAL is proud to award Heinrich it's DXPEDITION OF THE YEAR award for 1988. Wanna see what the DXpedition was like? The Northern California DX Foundation has the slide show available on a loan basis. Heinrich received his award at the RTTY dinner in Dayton (see front cover).

FLASH

With Jay in temporary retirement from the Awards Proram to review software for the Journal, I will pick up all the Awards work. Please send all award requests directly to me at the above address. Sending them to the Journal office only slows up the processing time.

THE TOP 50 IS COMING

Check out the September 89 issue for a new development. We will list the top 50 DXers in the September issue and follow up with this listing, three times per year. The list will include both worked and claimed. Thanks go to Carl, K6WZ/0 for this excellent suggestion. We know you'll want to be on the list, so watch future issues for more information. Start counting those cards and log entries.

73 and 88s **de Besty,WV7Y** ■

PACKET Continued from page 21

to the users of the digital modes.

KUDOS

To help me keep abreast of the world around me, I read other publications. One of them in "Worldradio". Bill Snyder, WOLHS, writes a column in there called "The Digital Bus". He put in a great plug for Dick Uhrmacher, KOVKH. Thanks for the compliments to Dick and I think that Bill, WOLHS, has a great column also. (ED: Bill's column had a nice plug for the RTTY JOURNAL also)

NEXT MONTH

I want to get into the discussion of hierarchial forwarding. I will try and have a listing of all of the abbreviations used in it for you to use on Packet. So, if there is anything else that you want me to cover next month, drop me a line to N6NKO @ WB6YMH-Z. Till then, BRAAAAAPPPPP (still running POWER). **de Richard, N6NKO** ■

HITS & MISSES Continued from page 2

you have been waiting for along with a brief summary from Roy Gould, KT1N (Contest Director). Next issue will also contain more on the contest. Just doesn't seem to be enough pages each month to publish everything.

BEACONS

This subject seems to be on everyone's mind these days. At present quite a few new ones are popping up on twenty meters and with the limited space on this band an overloading condition appears apparent. What direction or solution we should all take is also in question. There are arguments pro and con regarding these beacon BBS stations. I have received mail and verbal comments about this issue and I hasten to add that most are not favorable. But maybe, just maybe, there is a solution in sight.

Paul Newland, AG7I has been appointed to a digital Ad-Hoc committee by the ARRL for the purpose of evaluating some of these issues. Paul is aware of this problem along with others he will be addressing in the near future. But he is looking for some help. Paul would like to get input from some of you on this issue and other issues relative to the digital modes so that he can properly present them to the ARRL for their assistance and guidance. If you would like to be a part of this input group, please contact me here at the Journal first, so that I can explain more about this program to you before you volunteer yourself. Please do not volunteer unless you feel you can lend support to the group. Paul is a very knowledgeable Ham and I'm confident he will represent our views to best of his ability. Please contact me as soon as possible regarding this matter. I am home most evenings if you wish to phone me and I can also be reached quickly via my FAX number (714) 892-2720.

Continued on page 22

CLASSIFIED ADS

30 words $5.00, additional words 5 cents each. Cash with copy.
Deadline for copy is 1st of month for that month publishing
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RENEWALS

No doubt some of you may have noticed strange things happening with your renewal slip. What really happened is I ran out of some of the forms right in the middle of mailing. With mail bags all over the floor and low on renewal slips I had to improvise, consequently, some funny looking renewal slips. Will try not to let that happen again.

DX NOTES

QSL information for SV0AC/SV9 via Mike Woolverton, P.O. BOX 432, APO NY 09291. QSL information for KG4JO via Jeff Embry, (WI2T), 8650 Welbeck Way, Gaithersburg, MD 20879.

Cary Moles, ZL2AKI is looking for a couple of skeds of 20 meter RTTY. One from Nebraska and one from Arkansas. If you can help, contact Cary at 5 Edwards St, Bulls, New Zealand.

Received a letter from John, K4VDM about an incident he encountered back in December. It seems John worked VK9NS, Norfolk Island on 28.085 Mhz at 2340Z. Reports were exchanged and the signal was quite strong. John sent a QSL card and included the printed copy from disk just on a hunch. His reply from Jim Smith, VK9NS said no contact according to his log. Jim examined the printout and told John that it did not resemble his operating style. In fact Jim mentioned that he was near the frequency at the time too. It is such a shame to have people out there who will stoop to such low tactics to have their fun. Thanks John for sharing your story with us all. Incidentally, John has been a subscriber to the RTTY JOURNAL since the days of its' first publisher, Merrill Swan, (W6AEE, now deceased).

That's it for this month, no more space. **de Dale,W6IWO**

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