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RTTY JOURNAL ©

A DEDICATED DIGITAL PUBLICATION VOLUME 37 NUMBER 6 JUL/AUG 1989

3WIA - VIETNAN

L. to R. SSB & CW Ops. Vick, RL7GK - Al, UL7PAE - Yuri, RL8PY and RTTY Op Alex, UL7PCZ
See COVER STORY page 19

IN THIS ISSUE

RTTY JOURNAL

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USA..... $10.00
CANADA/MEXICO..... $12.00
FOREIGN surface $10.00/ AIR $20.50

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POSTMASTER: The RTTY JOURNAL (USPS 391850) is published monthly except May/Jun and Jul/ Aug issues which are combined for $10.00 per year by RTTY JOURNAL, 9085 La Casita Ave, Fountain Valley, Ca, 92708. Second Class postage paid at Santa Ana, Ca. 92799-9998 and additional mailing offices.

ADDRESS CHANGES: Send address changes to RTTY JOURNAL, 9085 La Casita Ave, Fountain Valley, Ca, 92708 **ISSN 0033-7161**

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HITS & MISSES

A GOOD TIME AT DAYTON

In the next issue you will find a number of pictures from the Dayton HAMVENTION held in April of this year. At the time of this writing I do not know how many of the pictures will fit that issue but I'll do my best to place as many as possible.

The Digital Digest forum was very well attended this year and the Hams who represented our fraternity did an outstanding job with their questions again this year. Having a panel discussion with members of the industry present makes it possible to bring up issues which will affect the entire Ham community. In past forums of this type where we presented our needs and ideas, industry has listened and responded. In fact two new radios out this year now have the ten hertz readout we have been asking for and I'm told this addition was in direct response to the Digital Digest forum in Dayton the year before. I hope to continue this format again next year, so those of you who may have some suggestions for questions that could be used next year, please write them up and mail them to me. I'll start a file now for next year. Nothing like planning ahead a little.

Again this year at Dayton the RTTY dinner was a great success. A special thanks to our host Bob Foster, WB7WQG who outdid himself in the planning and execution of this dinner. Although we were a little bit crowded in the room given to us, we made do and the food was excellent. Bob is going to be our host again next year and has said he will plan on getting a larger room for RTTY group. Because of the small room, some folks had to be turned away and he doesn't want that to happen next year. Might be a good idea to keep this in mind so that when Bob asked for sign-ups for the next dinner you can get your name on the list right away.

The Oh-Wa-Tah Society (some claim it is a secret society) was strengthened by adding all those present to its ranks. I was selected to go through the initiation ceremonies to represent all those present. This was quite an experience to say the least, what with all the horns and special poses I had to take during the ceremony. I'm glad I took the oath for this great society and would gladly do it again for deserving applicants. This great society is just another way of cementing our RTTY gang together more solidly. As the pictures will show I also had fun going through the ceremony as it was administered by the most noble Bob Foster, WB7QEG and his assistant Jerry Tricher, WA1IUF. They made the initiation a real experience, one I shall never forget.

If you are planning on going to Dayton next year, I hope you will plan attending the RTTY Dinner. Attending will give you a chance to also become a member of the Oh-Wa-Tah Society. There are no fees, no special obligations (except to be loyal to RTTY), no officers, and the rules are so simple to follow, no one will ever make a mistake. The rights bestowed upon the members is unlimited, far to many to mention in such a small publication as the RTTY Journal (use your imagination).

MSO'S

It seems a great controversy is arising over the twenty meter spectrum and the use of MSO's and BBS'S. For many years only two frequencies have been employed by MSO's for their operation and they were very compatible with all those who operated in the twenty meter band. Whenever their was a contest weekend they usually shut down which was much appreciated by the contesting group. Their sophisticated MSO software was designed to keep transmissions short and to the point and the users group kept their mailboxes cleansed of inappropriate messages. These systems have attained a very high degree of excellence with many systems existing on the same frequency.

That scenario seemed to have changed in more recent times. In fact that same group of SYSOP's is still operating their

Continued on page 14

Dick Uhrmacher, K0VKH
212 48th St.
Rapid City, SD 57702

MSO'S

Hi Gang! Well, it's really hard to believe that another Dayton HAMVENTION has come and gone, but this years gala event was one to remember. The weather wasn't the best, and when it rains on Friday and Saturday on HAMVENTION weekend, the parking problem really gets to be bad. If I were to have any criticism of the way the Dayton HAMVENTION is managed, it would be that they need to solve the increment weather parking problem. There was a lot of grumbling for those attending about having to wait a long time in the rain for the shuttle buses to Hara Arena. Closing off the front parking lot to parking sure didn't help matters either, and hopefully they will come up with a better plan next year.I thoroughly enjoyed seeing many friends and acquaintances this year at Dayton, and making some new friends as well.

While I'm on the subject of friends, I want to say how lucky and privileged I feel to have so many good RTTY friends. It's a pleasure to associate with others who have this mode in common, and from where I stand, there just isn't any other mode that comes close to RTTY for developing long term friendships. I'd like to thank Bill Synder, W0LHS, for his nice words in WORLDRADIO, and as he pointed out, we used to be at opposite sides of the fence some years ago. However, we've become good friends over the years and I sure appreciate being on the same mode as Bill!

Recently however, we have seen a threat to some of these friendships appear on the horizon, mainly the proliferation of MSO and CBMS's, (computer based mailbox systems), on 20 meters. No one station, or series of stations, has any more or less "right" to operate an automated MSO/CBMS. And, as the regulations now stand, no "sub band" has been mandated in which MSO/CBMS's must operate. In other words, just about anyone with the equipment, time and dedication, can pick just about any frequency in the digital portion on 20 meters, to operate his MSO/CBMS on.

The reality of the situation is however, that we have had quite a proliferation of automated systems in the past year, to the point that many of the newer systems interfere with the older, more established systems. For example, a CBMS has recently been activated in Guatemala. This CBMS I am told runs high power, and is sandwiched in between two other automated systems on 20 meters. This high power system not only interferes with the other systems on 20 meters, but it also makes it impossible for other automated Guatemala stations, which have been in MSO service for many years, to continue to provide MSO service. First you do not need more than 100 watts output for any 20 meter MSO or CBMS. Secondly, if each of us strikes out on our own individual frequency for our automated systems, no one else will be able to use 20 meters for ragchewing, DXing, CW, AMTOR, Packet, etc. For example, for the past 11 years, the National Autostart Frequency has about a dozen automated systems parked on 14 087 750 Hz (carrier frequency), and they have very little problem with interference between stations. The very same situation can apply to the CBMS stations, and I would encourage those newcomers, (such as the Guatemala CBMS), to join with other stations already situated on a well known frequency. Coexistence is most certainly better than having some portion of the band mandated for automated service, and that's what it's all coming to if we don't learn to cooperate.

Finally, before I climb down off the soap box, I'd like to reiterate one other thing that was cussed and discussed at length at the Dayton HAMVENTION, and that's the use of a "beacon" on an automated system. If you are new to RTTY, new to the automated system business, or even thinking about running a CBMS, please do yourself and everyone else a huge favor, and totally disable any beacon feature that you may find available in your software. You can't imagine how frustrating it is when you've just hooked up with a DX station, a good friend, or an interesting QSO, when some stupid beacon fires up on top of you, completely oblivious of your QSO!! Not only are beacons of this nature illegal, but they will cause you tons of unpleasantness, totally outweighting any service that you may provide. If you want to learn some new four letter words, fire up your beacon! If you want to provide a well liked automated service, make sure it's OFF!

THE RTTY DINNER

This years annual RTTY Dinner during the HAMVENTION was the best ever. I'd like to take this opportunity to thank Bob Foster, WA7QWG, (RTTY Dinner Host), for one of the most enjoyable evenings I've had in many years. Not only was the food, fellowship and technical aspects of the Dinner outstanding, the initiation of Dale Sinner, W6IWO, into the prestigious OH-WA-TAH Society, was a complete gas. I don't think I've laughed as hard in the last 10 years, and everyone thoroughly enjoyed themselves. Bob has graciously agreed to be next years host, and I'm going to get my reservations in early! Thanks for a very enjoyable evening Bob!

HAL DS/MPT3100 MONITOR CRT

Recently there's been some interest in swapping out the video monitor (CRT) in the popular HAL DS/MPT3100 system. Al, N1API, MSO Sysop from Meriden, CT, has recently completed just such a conversion, and will shortly have an article published in the RTTY Journal on the technical aspects of this conversion. Stay tuned!

MSO RAMBLINGS

- I'm happy to report that Ernie, W6ZRR, MSO SYSOP from San Luis Obispo, CA is recovering satisfactorily from his second major surgery in the past eight months. Ernie's MSO is back in service again, and we all hope that he's back to good health in short order. Get well Ernie!
- John, TG9VT, reports that his MSO is off the air for the Summer months, mainly due to the lightning threat. We miss John's booming signal, and hope that he gets back on the National Autostart Frequency soon.

Continued on page 6

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

CONNECTIONS

Hello all. The summer vacation was nice but it is nearly August so had best get with it.

WE HAVE MAIL

Jack Russell, K2RS (The Fly Fisherman) is a new subscriber to the RTTY Journal. He is looking for a good RTTY program to use with his C64/Kantronics KAM combination. Jack, give Kantronics a call, they may have a C64 program for the KAM, or at least know where you could obtain one. Any KAM users out there with it running on a C64?, let us know what you
are using for software. Seems to me I mentioned a C64 RTTY program for multimode controllers some time back, and I have looked in back issues with no luck. Perhaps my imagination is pulling tricks on me again.

Bill Symons, K4IH, 106 Captains Way, Anderson, SC 29625 currently uses a Tandy Model 4 computer with a Crown ROM-116 for RTTY. He expects to get an IBM Pc clone in the near future. This presents a problem because he will need an MSDOS compatible program to drive the ROM-116. So he is looking for MSDOS compatible software for this task. He does not want to junk the ROM-116 as it has done such a good job for him. He also mentions that if the software for the PC is not available, then he needs a conversion disk to go from TRSDOS 1.3 to MSDOS. Now that may be a bit tricky - I am not aware of a conversion program that can convert a TRSDOS compatible program to MSDOS compatibility. Has anyone been able to use a ROM-116 with a IBM PC clone??

Dan Testa, 390 Lincoln Ave., Newark, NJ 07104, has an EXTEL Teleprinter model AH-11R and also a C. Itoh video terminal model CIT101. He has had no success getting either to operate on RTTY. He has had no luck getting schematics or data from the manufacturers of this equipment so he is looking for schematics for the EXTEL, and schematics & operators manuals, etc for the CIT101. He will pay for copying if anyone has a source. I might say that it is very difficult, if not impossible, to get gear like this working, much less configuring or modifying it for RTTY without adequate documentation. Anyone who can assist please contact Dan directly.

AFSK ADDITION TO KENWOOD TS-430S

The following, which should be of great interest to TS-430 owners, is a verbatim transcript of a very well done conversion article received from Jim Sladek WB4UBD. Thank you Jim.

AFSK MODE ADDITION TO KENWOOD TS-430S

by James A. Sladek WB4UBD

The purpose of this modification is to change the TS-430S FM mode switch to function as an AFSK mode function switch enabling LSB mode for all band, switching to AGC Fast and enabling CW NAR/WIDE filter selection.

NOTE: After this modification, FM mode will not be available.

PARTS REQUIRED

Qty 8 - 1N4148 (or equiv) silicon switching diodes
Qty 1 - 7400 2-input quad NAND gate IC
Qty 1 - 2N2222A (or equiv) NPN transistor
Qty 1 - 2.2K 1/8W resistor
Qty 2 - 4.7K 1/8W resistor
Qty 2 - 100K 1/8W resistor
Qty 1 - 0.1 uF capacitor
Qty 8 - ferrite beads

PROCEDURE

1. Remove the top cover. Disconnect cable harnesses and remove the IF UNIT and CONTROL UNIT circuit boards labeling the plugs as they are disconnected.

2. Make the following changes to the IF UNIT circuit board:

a. Remove jumper located near connector 21-1 and connected to 21-2 (FMB).

b. Remove jumper located near connector 25 and connected to 24-3 (FMB).

c. Remove diode D19.

d. Cut trace between connector 21-4 (CWB) and Q9-E. Install diode on foil side with cathode to Q9-E and anode to connector 21-4.

e. Install diode on foil side with cathode to Q9-E and anode to connector 21-2 (FMB).

f. Remove diode D64 and reconnect on the foil side with cathode to J8 (IB7 cathode) and anode as before.

3. Make the following changes to the CONTROL UNIT circuit board:

a. Remove diode D17.

b. Remove jumper located between D80 & Q37 and connected to L41. Install diode in its place with the anode connected to L41.

c. Install diode on foil side with anode to connector 12-1 (FMB) and cathode to cathode of diode installed in step b.

d. Remove diode D50 and reconnect on the foil side with anode to D44 anode and cathode as before.

e. Remove resistors R180 and R184.

f. Fabricate the circuit depicted in figure 1. Install on the component side of the CONTROL Unit circuit board above IC1 & IC6 and make connections from the new circuit as follows:

FMS to hole near connector 27 vacated by removal of D50 cathode in step d.

LSS to catchode lead of diode D44 near connector 19.

R181 to lead of resistor R181 near IC6.

R182 to lead of resistor R182 near D24.

Continued on page 6

HENRY RADIO IS THE PLACE
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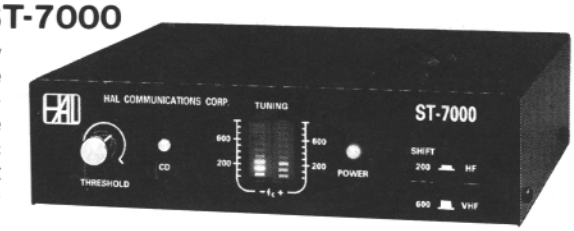
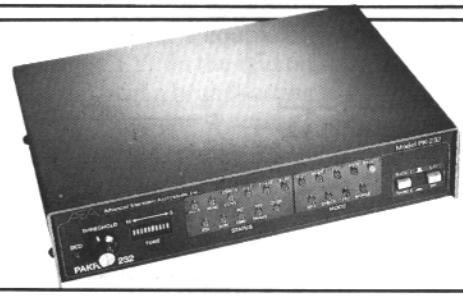
The TEMPO MPP1

. . .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.

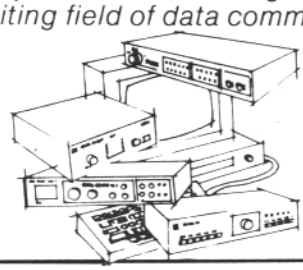




The PK-232 by AEA

. . .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.



NO. 1 For the fun (and very affordable) mode, VHF Packet, AEA PK-88 with personal mailbox, 8K programmable memory and TCP-1 P compatability.
For serious 20 M world-wide DXing on Packet, 200 or 600 Hz shift. . .add the superb HAL ST-7000.

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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CONNECTIONS Cont. from pg. 4

Q59-E to hole nearest Q59 vacated by removal of R180 in step e.

Q55-E to hole nearest Q55 vacated by removal of R184 in step e.

IC6-1 to hole near C149 vacated by removal of R184 in step e.

+5V to jumper adjacent to C179 (located at notch of IC-1).

GND to exposed lead of R202 (located opposite to notch end of IC5)

DIFFERENCES FROM NORMAL TS-430 OPERATION:

CONTROL UNIT steps d through f result in a bypass of the TS-430 memory function for AFSK mode selection, such that:

~ when a frequency is saved in memory or the transceiver is powered down in AFSK mode, recall or power up will be at prior frequency but in LSB mode

~ when AFSK mode is selected on one VFO, selection of any other mode on the second VFO will deselect AFSK and the first VFO reverts to LSB mode

~ with both VFOs in LSB mode, activating AFSK mode on one will automatically activate AFSK on the other

Elimination of steps d through f above would allow a simpler modification to be made and the AFSK mode (prior FM) would be retained in memory or VFO operations. The actual frequency transmitted or reeived, however, would be offset from that display by 40 KHz becuse of microprocessor programming for the FM mode.

4. Reinstall IF UNIT & CONTROL UNIT circuit boards and reconnect all cable harnesses. Reinstall the top cover. AFSK selection will now function in AFSK mode as described above.

Special thanks to Bill Sanderson W4OHZ, who allowed me to use his TS-430 as "guinea pig" and who did my operational proofing. End of Article

For all our RTTY Journal readers who have been asking for construction articles, please note that the above is published in partial fulfilment of their desires. Stay tuned in, more construction articles are forthcoming.

NEW PRODUCT

Kantronics announces the release of Superfax II. Superfax II requires the use of a Kantronics TNC using version 2.8 or later firmware. Some features are as follows:

~ Unattended mode: automatically synchs and saves picture directly to disk, then waits for next picture.

~ Semi-unattended mode: Automatically synchs and receives the picture but allows you to decide if you want to save picture.

~ Manual mode: full fax synch and capture to buffer or disk.

~ View from buffer or disk file.

~ Print picture black on white or white on black.

~ Supports most graphic display modes and COM1-COM4.

~ Prints to Epson printers or custom setup for 9-pin graphics capable printers.

That's it for this issue folks, more construction projects next month. See you then. **Very 73 de Cole ,W6OXP** ■

DON'T BE A BEACONITE!

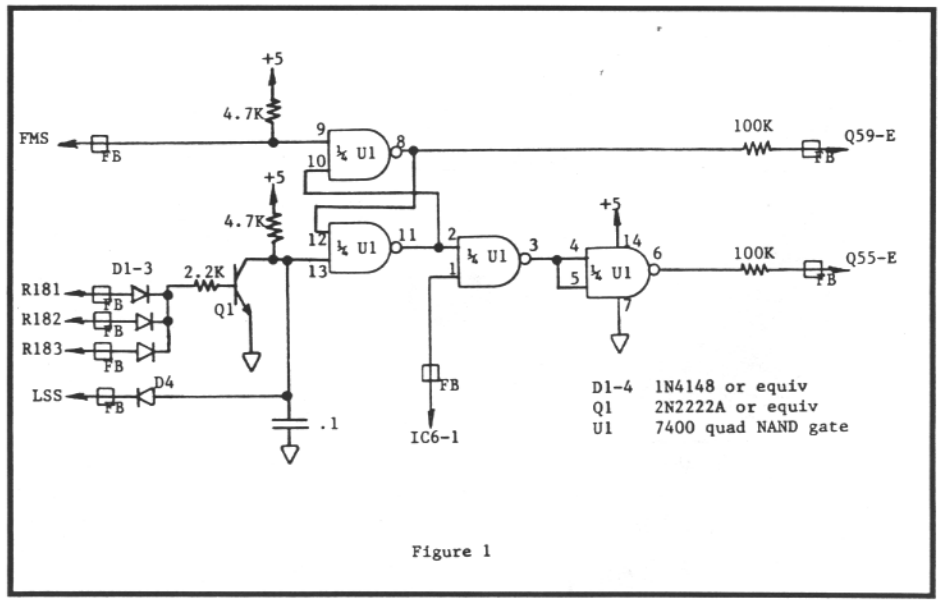


Figure 1

MSO's Continued from page 3

- Want to check 10 Meter propagation? Tune in 28 190 000 Hz (mark frequency) and try the KA0ATQ MSO. Jay's beam is normally towards the east, which should provide a good indication of the 10 Meter band's activity. His access code is: MSOATQ.
- Jerry, WA1IUF, has retreated to his vacation villa in Connecticut for the Summer months. I hope the fishing is good Jerry!

That's about it for this month Gang. I hope to continue the MSO Basics article in coming months. Enjoy the Summer activities, and I'll see you on RTTY!

73 de Dick, K0VKH ■

INTERNATIONAL

A Contest Manager's View of the S.A.R.T.G.

By Line: **Bo Ohlsson, SM4CMG**
Skulsta 1258
S-710 41 FELLINGSBRO
Sweden

Background

So far as I have been able to find out from the records, the first RTTY–QSO from Sweden, and probably the first from all Scandinavia, was carried out by Ingemar, SM6CSC on the 18th of January, 1964. In 1963, he had obtained a Teletype machine that had been sent to him all the way from San Francisco by Rus Stedinger, K6ZBL. First using a very simple TU, he then worked DL4IA in his first attempt, and by using the only permitted A1 mode. Ten days later, Olle, SM5KV (now SM0KV) helped in obtaining an interim permit. This was later followed by regular permission for all to use the F1 mode. This enabled the real RTTY era to begin here. Another of the pioneers at that time is Lennart, SM6AEN. He and Ingemar wrote many interesting articles about RTTY in our SM–QTC during these first years. Olle managed to obtain several teleprinters from his work in our Royal Teletgraph Service, delivering them to interested HAMS, and, after a couple of years, a handful of guys were QRV on RTTY. In the mid 60's, the SSA (Sveriges Sandare Amatorer) began broadcasting HAM bulletins in the RTTY mode every Sunday morning, with Ingemar being the first operator for several years.

It wasn't until 1968 that I began to understand what this mode was all about and became really interested. My first and unforgettable QSO was with the late Reg, G6JF, and sold me on the fascinating RTTY mode. Being a contester for a long time on other modes, I soon became involved in the RTTY contests as well, but that's another story . . .

I believe that the OZ's came up in the RTTY mode at about the same time as we, but this has not been confirmed. The LA's received their official permits on the 1st of January, 1973. Before that time, however, they could apply for special permission in every single case. On the 1st of May, 1972, the OH's received their permits. I especially remember the late Sig, OH0NI, on Aland Island, as being one of the most active RTTYers from Finland at the time.

The First Year of the S.A.R.T.G.

The Scandinavian Amateur Radio Teleprinter Group was officially formed on the 1st of May, 1970, and elected the following first staff: OZ4FF, President; LA7MC, Secretary; SM3BHT, Cashier; SM4CMG, Contest Manager; and SM7DMG, Newssheet Editor. Other officials were OH2MK and OZ7OF.

We started with net-traffic on 3585 KHz every Wednesday evening. I acted as net leader and also transmitted bulletins for our members. We also obtained a special call, SK4RY, and transmitted a newsbulletin on 14.090 MHz every Saturday night and thus we began to be internationally established. Later, this traffic was shared with SM5BRQ, SM3BHT, SM5BTG and others. Eskil, SM7DMG produced the first issue of the *SARTG NEWS* in September, 1970. This was followed by several other newssheets about every 3rd month, containing the hot stuff for newcomers and others. This very much needed RTTY information was hard to obtain from the regular Scandinavian HAM magazines. Our Machine Managers, SM5AP (now SM7AP) and SM5BRQ were able to obtain machines, and spare parts for most of the European and US makes, for our fast–growing members. The Scandinavian RTTY activity increased considerably after the first year of the SARTG. At that time, we were mainly using 850 Hz shift, but some of our members were trying the now common 170 Hz shift, with good results.

It then became my responsibility to organize an annual worldwide contest and a local activity contest. For the worldwide contest, the 3rd weekend in August seemed to be the best timing for the contest. We decided to use rules similar to those used for the Scandinavian Activity Contests on CW/SSB for the first try. The first SARTG WORLD WIDE RTTY CONTEST took place on 21–22 August, 1971 and at that time was considered to be a great success. We did find, however, that some changes in the rules were in order to make them more fair to all parts of the World and these were made over the next few years. Since then, the rules have remained about the same since the 3rd contest in 1973. The 3 x 8 hour operating periods had been set, following an idea suggested by Paul, KH6AG. These worked very well and have been adopted in most areas. Carl, OZ2CJ, took over as Contest Manager for 1974 –1983 and then Jorgen, OZ1CRL for 1984 –1988. They have both done a fantastic job during those years, making our contest even more popular.

SM6AEN to the Rescue

A crisis occurred in 1972, after only two years, when we nearly gave up on the SARTG idea. Our membership had dropped from about 150 to only 50. We then contacted the veteran RTTY enthusiast, Lennart Bjureblad, SM6AEN and asked him to reorganize the Group. At that time, he was not even a member but, thank the Lord, he joined us and helped to get things going again. He then became the new editor of the *SARTG NEWS* magazine. I notice that he edited 50 of the 70 quarterly issues of about 60 pages each. He has also been the chairman of our Group for many years during vacancies, and he really has been, and still is, enthusiastically urging all of us to keep up the work. The SARTG today is a large Group with about 1,000 members and with a good economy and reputation. During the 20 years of the SARTG's existence, there have been, of course, many more Scandinavians involved who

Lennart, SM6AEN

Continued on Page 8

INTERNATIONAL – *Continued from Page 7*
have provided outstanding assistance over varying length periods. While all that effort is appreciated sincerely, there are just too many to be able to mention them all here.

The S.A.R.T.G. – 1989

After our latest election, held at the annual conference on 22 April of this year, the SARTG has the following crew: President (vacant); Cashier, SM6BJK; Secretary, SM7JRD; Information Secretary, SM7NBQ; and Traffic Secretary, LA3WH and Deputy SM6DHD.
Other officials are: SM2CTF, SM6AAL, OZ1AKD, LA4LN, OH2BP, SM6DGF and SM6FJB.
Contest and Awards Manager: SM4CMG.
Program Bank: SM7SDS, SM6FLL, SM5IO and SM6EKP.
Editor of *SARTG NEWS*: SM6AEN. Printer: OZ9GA.

Scandinavian Activities Today

Some Scandinavians are very active in the HELL, FAX and SSTV modes. Several others are QRV on ASCII and AMTOR. There are mailboxes and there is a very fast-growing Packet Radio activity. Still being mainly a "classic" baudot RTTY operator myself, I hope that some of our experts in those other digital modes will give you more accurate information about what is going on. Tom Victor, LA4LN (the SARTG's Packet Radio Manager) tells me that, in Norway, for instance, there is an estimated 10% of all licensed amateurs that are now QRV on Packet!

On Sunday mornings, there are national bulletins broadcast in RTTY by SSA and on SK5SSA (operator, SM5BKK) on 3590 KHz, at 0730 UTC. Mode: 45, 45 baud RTTY.
NRRL (Norsk Radio Relae Liga) over LA9HQ (Editor/Operator LA4LN) broadcasts on 3585 KHz at 0800 UTC. Mode: 110 baud ASCII. Thanks to this one, the ASCII activity has increased on 80 meters. This mode was used mostly on VHF (or UHF) before the Packet era began there. The bulletins are also available on all AMTOR and Packet Radio BBS's.

Except for the Packet Radio traffic, there is also some RTTY activity on VHF, mainly 2 meters, with 144.600 MHz as the center frequency for FSK and 145.300 MHz for FM AFSK. To promote this, as well as the LF–band activities, the SARTG is sponsoring a "Happy New Year" contest on the 1st of January every year. There are two sections, a couple of hours each, on HF (3.5 and 7 MHz) and VHF (2 meters). Both sections have been very well attended by stations all over Europe. Winners this year: HF single operator, SM5FUG; HF multi operator, SK6LK; HF SWL Y52-11-I; and VHF-section: SM6LKT.

A few guys are still using mechanical machines for RTTY. For example, for many years, one of our top contesters, Jan, SM5FUG, has preferred to run his Siemens T–100S pageprinter. Most of the gang, however, are using computers. At present, I am using a Swedish LUXOR ABC 80, but almost any make may be found in the different Scandinavian shacks, and PC users are, of course, also increasing over here. As a popular service to our members, the SARTG is keeping a program bank for the free copying of various computer programs supplied by other members. There are four sections run by skilled operators for: Atari, Commodore, PC and the Common section for Luxor, Apple, Microbee, Spectrum, etc.

W.S.R.Y. – Worked Scandinavia RTTY Award

Your application for the WSRY award will be welcome. This was introduced in 1970 and run for a number of years with extended rules for Bronze & Silver Ribbons and Gold Rosette stickers. To this date, with more than 180 "general" WSRY's, about 40 each of the Bronze's & Silver's and Gold's have been awarded to RTTYers and SWL–RYers from all over the world. For more details of this award and stickers, see elsewhere in this month's issue of the *RTTY Journal* or drop me a line.

You may work RTTY stations from OZ–SM–LA–OH on almost any day on the DX–bands. From the other Scandinavian possessions, such as JW–JX–OY–OX–TF–OH0, the activity is more sporatic. For the latest information on this, keep an eye on TG9VT, John's DX NEWS column.

Finally . . .

I hope to meet all of you in the 19th SARTG WORLD WIDE RTTY CONTEST on August 19th and 20th of this year. See the Rules in May/Jun issue of the *RTTY Journal*. You will find that they are the same as before, but with the addition of a new classification, Single Operator/Single Band. Your logs will be welcome at our new mailing address for this year. Being the Contest & Awards Manager again, after 15 years of "rest," I really hope that I'll be able to keep up the very excellent work of my dear predecessors. To be sure, I have secured great assistance from the following "group": SM5CZD, KB2VO and SM4LLP, and from my daughter, Christina.

73 de "Bo", SM4CMG ■

Bo, SM4CMG, at the controls of his Ham Shack.

Others May Try to Imitate, But...

Only One Can Be The Best

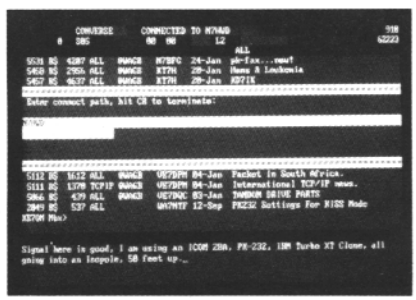
Morse Code - Baudot - ASCII - AMTOR - Packet - Facsimile - Navtex

It's a lesson you learn very early in life. Many can be good, some may be better, but only one can be the best. The PK-232 is the best multi-mode data controller you can buy.

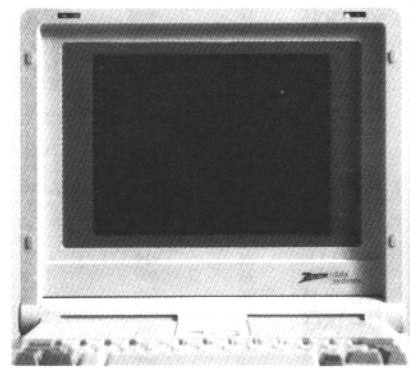
1 Versatility

The PK-232 should be listed in the amateur radio dictionary under the word Versatile. One data controller that can receive seven digital modes, and can be used with almost every computer or data terminal. You can even monitor Navtex, the new marine weather and navigational system. Don't forget two radio ports for both VHF and HF, and a no compromise VHF/HF/CW internal modem with an eight pole bandpass filter followed by a limiter discriminator with automatic threshold control.

The internal decoding program (SIAM[tm]) feature can even identify different types of signals for you, including some simple types of RTTY encryption. The only software your computer needs is a terminal program.



PC Pakratt Packet TX/RX Display



Facsimile Screen Display

2 Software Support

While you can use most modem or communications programs with the PK-232, AEA has two very special packages available exclusively for the PK-232....PC Pakratt with Fax for IBM PC and compatible computers, and Com Pakratt with Fax for the Commodore 64 and 128.

Each package includes a terminal program with split screen display, QSO buffer, disk storage of received data, and printer operation, and a second program for transmission/reception and screen display of facsimile signals. The IBM programs are on 5 1/4" disk and the Commodore programs are plug-in ROM cartridges.

3 Proven Winner

No matter what computer or terminal you plan to use, the PK-232 is the best choice for a multi-mode data controller. Over 20,000 amateurs around the world have on-air tested the PK-232 for you. They, along with most major U.S. amateur magazines, have reviewed the PK-232 and found it to be a good value and excellent addition to the ham station.

No other multi-mode controller offers the features and performance of the PK-232. Don't be fooled by imitations. Ask your friends, or call the local amateur radio store. We're confident the PK-232 reputation will convince you that it's time to order your very own PK-232.

Call an authorized AEA dealer today. You deserve the best you can buy, you deserve the PK- 232.

Advanced Electronic Applications, Inc.
P.O. Box C-2160
Lynnwood, WA 98036
206-775-7373

AEA Retail $415.95

Amateur Net $349.95

1988 ARRL RTTY ROUNDUP CONTEST SCORES

Single Operator Top Ten W/VE--Low Power

AA5AU	44,616
NT0V	37,000
VE6ZX	33,210
KD6PY	31,692
WJ7S	29,120
NU0P	24,948
NO1Y	24,794
AA5FR	23,004
K1EVU	21,520
KD4W	18,864

W/VE--High Power

NG7P	73,728
K6LL	72,447
KT1N	69,102
W3LPL (W3EKT,op)	66,255
WS7I	52,380
WA7EGA	48,720
AA4TH	47,437
WF5E	47,168
K2NJ	41,322
KE0KB	41,308

DX--Low Power

K2BMI/VP2V	42,772
4M5RY (YV5KAJ,op)	33,768
HI3ADI	31,875
FF1NZH	18,612
G0ATK	17,784
G4SKA	15,820
SP3SUN	14,105
CX5BX	11,160
9Y4DG	10,860
AL7BK	10,659

DX--High Power

KP2N	46,200
HK1LDG	42,930
KL7XD	29,952
OK2FD	19,800
XE1VV	15,960
OH2LU	9,840
SM4CMG	6,600
LA7AJ	5,733
HP1AC	5,546
DK3EA	3,975

Dave, J52US and XYL - Dayton 1989

MULTI OP

	SCORE	QSOs	MLTS	HRS
UZ9CWA (*)	27720	315	88	24
WA0VQR (+N0BG)	19584	306	64	18
N2DCP (+N4TSV)	17019	279	61	17
HA5KAG (*)	15300	225	68	21
WA0QIT (+N0EOB)	13462	254	53	24
WB6WQA (+N6QEZ)	12168	234	52	16
KI7T (+WB7VHL,WL7V)	11088	231	48	22
N0FMR (+NW0F)	10450	209	50	19
JA1YFG (JO1RUR,JP1JFG,ops)	6240	120	52	24
KA3DSX (+KA3HNM)	5969	127	47	18
OE1XJA (OE1s ACB,EOA,ops)	5428	118	46	24
KF4WB (+N4UNE)	4850	97	50	23
W3EAX (KA1GD,KD3FU,ops)	3713	79	47	8
W5VZF (+KB4HB,WA4DDE)	3078	114	27	24
HG0D (HA0s BW,DR,HA,HG,ops)	308	22	14	24
N4TRA/MM (+N4RHV,N5DST)	143	13	11	8
*HA5KAG (HA5s AEX,CE,HA8JP,ops)				
*UZ9CWA (UA9s CGA,CFV,SMW,CR,UV9CAF,ops)				

LOW POWER DX

K2BMI/VP2V	42772	578	74	22
4M5RY (YV5KAJ,op)	33768	252	134	22
HI3ADI	31875	425	75	17
FF1NZH	18612	188	99	24
G0ATK	17784	247	72	24
G4SKA	15820	226	70	24
SP3SUN	14105	155	91	24
CX5BX	11160	180	62	24
9Y4DG	10860	181	60	18
AL7BK	10659	187	57	14
YO2IS	10150	175	58	24
WH6I	9702	198	49	11
KL7PG	9050	181	50	13
EA8AKQ	8910	162	55	16
PT2BW	8232	147	56	15
EI9CB	7367	139	53	16
JA1DFQ	6944	124	56	24
EA8RA	6750	125	54	24
JA1AYC	6360	120	53	9
G0ARF	6201	117	53	12
GW0ANA	5661	111	51	22
G4MKO	5310	118	45	18
EA5FKI	4914	91	54	24
7J6CAS	4680	117	40	24
5Z4BH (KB7NK,op)	4002	87	46	24
UA9FBV	2940	84	35	24
ZL2AKI	2627	71	37	23
KH6CP/1	2496	78	32	11
9J2KF	2480	62	40	17
OE3GOU	2380	70	34	16
SM5BKA	2340	65	36	12
YO6JN	2170	70	31	24
DL9RBV	1848	56	33	24
LA0BX	1736	56	31	9
GI4TSK	1664	52	32	13
YO6CFB	1568	56	28	24
HA1YA	1272	53	24	8
DK7FP/P	1189	41	29	24
DK4JN	1131	39	29	24
SM7BGE	989	43	23	9
UA3TN	920	46	20	24
HL9FN	792	36	22	24
EA8AZM	437	23	19	24
SM5CZD	420	28	15	10
SP2UUU	285	19	15	24
YO7FT	154	14	11	24
OZ1QI	132	12	11	24
ON6CR	30	6	5	6

1988 ARRL RTTY ROUNDUP CONTEST SCORES (cont.)

HIGH POWER DX

	SCORE	QSO	MULT	HRS
KP2N	46200	550	84	22
HK1LDG	42930	477	90	24
KL7XD	29952	384	78	19
OK2FD	19800	264	75	17
XE1VV	15960	285	56	24
OH2LU	9840	164	60	12
SM4CMG	6600	120	55	15
KL7IF/4	6370	130	49	24
LA7AJ	5733	117	49	15
HP1AC	5546	118	47	24
DK3EA	3975	75	53	24
KH2D	3772	92	41	24
DF9XI	2193	51	43	24
JR1IJV	1176	42	28	7
KL7CQ	9684	42	22	4
DK5KJ	750	30	25	24
DL2YAK	231	21	11	4
SM5EIT	208	16	13	24
SP3BGD	16	4	4	24

LOW POWER VE/US

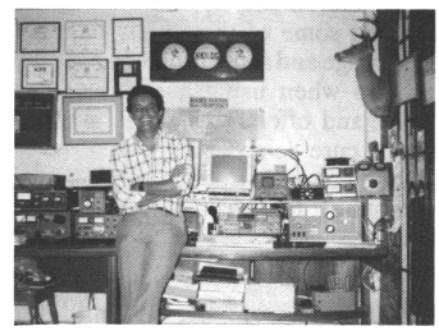
AA5AU	44616	507	88	24
NT0V	37000	500	74	24
VE6ZX	33210	405	82	19
KD6PY	31692	417	76	24
WJ7S	29120	364	80	24
NU0P	24948	324	77	24
NO1Y	24794	322	77	24
AA5FR	23004	284	81	21
K1EVU	21520	269	80	13
KD4W	18864	262	72	17
KG5EG	18600	300	62	22
VE3UR	18504	257	72	24
NU1E	18000	225	80	24
WA2PNI	16170	245	66	24
KI4MI	15318	207	74	22
VE6BS	13719	269	51	23
WB7Y	13624	262	52	18
WA3ZKZ	13455	195	69	21
KA1LMR	13333	199	67	18
NT3B	12888	179	72	18
WB9MSM	12768	228	56	24
WB3DDF	12726	202	63	22
N3UN	11946	181	66	11
W1TR	11592	184	63	17
W4HBK	11524	172	67	12
KB4GID	10830	190	57	18
N1FIO	10726	173	62	16
WB6SSW	10545	185	57	20
K7GS	10540	170	62	12
W8LNK	10443	177	59	21
WB4M	10354	167	62	14
KB1EM	10080	180	56	10
WB8WRY/3	10050	201	50	20
WB8YJF	10032	152	66	14
K4IBP	9858	159	62	16
N2FF	9180	170	54	22
K4JYS	8758	151	58	15
WA7PVE	8536	194	44	12
NF0B	8477	173	49	12
WM6H	8280	184	45	23
KD4MM	7975	145	55	13
ND2K	7830	145	54	11
W1HFN	7670	130	59	13
WB2ZQP	7168	128	56	22
WD9DZV	7128	132	54	7
KC4CSD	6095	115	53	11
KW3F	6032	116	52	13
NJ1H	5760	120	48	14
KD2XN	5760	120	48	13
W0LHS	5547	129	43	24
NT1I	5500	110	50	11
N3BOU	5424	113	48	19
WA8FLF	5244	114	46	19
K0BP	5166	123	42	24
KI4QJ	5040	112	45	14
N8JNB	4950	110	45	23
KA1QFU	4752	108	44	18
K8OSF	4536	108	42	10
KB7M	4480	112	40	18
NX9H	4410	105	42	19
W6CN	4232	92	46	15
KD4OM	4183	89	47	16
K5LTW	4165	119	35	7
WM2U	4141	101	41	15
KR9G	4108	79	52	16
W4RQK	4047	71	57	17
KC7MM	3996	108	37	24
VE2OWL	3960	88	45	20
WB3FIZ	3854	82	47	8
N0HYG	3816	106	36	13
KC7MJ	3636	101	36	10
WA6SDM	3612	84	43	13
W9FFQ	3388	77	44	17

	SCORE	QSO	MULT	HRS
KA8IZE	3150	75	42	12
WA4JJY	3128	68	46	24
N4RTK	2940	70	42	17
KF5SH	2812	76	37	15
W8EXI	2808	72	39	17
NJ7H	2706	66	41	11
VE2FFE	2613	67	39	24
KF4FP	2516	68	37	24
KI6X	2418	78	31	11
K7SGT	2360	59	40	15
WA3INX	2304	64	36	15
WA4BHK	2301	59	39	7
KE6T	2300	50	46	13
N7LQS	2294	74	31	8
KC3ST	2240	56	40	11
KA1RJJ	2232	62	36	12
NN4K	2196	61	36	10
WA9AKT	2170	70	31	10
WB4LKP	2145	55	39	10
K8CHN	2144	67	32	17
KC8FS	2133	79	27	20
WB2SPN	2128	56	38	8
WA9YII	2117	73	29	14
WB5ASD	2108	68	31	24
W7ZRR	2100	75	28	13
KK4DF	2100	60	35	10
KD5IT	2090	55	38	24
KE8UA	2072	56	37	21
KC8YL	2040	60	34	24
W2AYJ	2014	53	38	10
W6JOX	2013	61	33	13
K2PYM	1995	57	35	18
KB5NR	1960	56	35	8
WA5VBE	1952	61	32	7
WB0IBZ	1947	59	33	12
N1DM	1917	71	27	10
K7JRN	1876	67	28	20
WA1TPE	1749	53	33	9
KY1T	1696	53	32	7
KD4VR	1664	52	32	10
KA5ZBT	1643	53	31	24
WA4MCZ	1590	53	30	8
WA3UXZ	1560	60	26	11
KA0ZMY	1560	60	26	12
N3FOG/T	1550	62	25	12
KE2JJ	1500	50	30	11
N9GTT	1475	59	25	24
NI1L	1456	56	26	10
KD0SF	1430	65	22	7
K2RYI	1326	51	26	6
WA4DAZ	1271	41	31	4
WD6FYJ	1104	46	24	10
KB5ECK/T	1098	61	18	14
W8VQI	1040	40	26	6
W8IDM	945	35	27	5
KD9HT	900	36	25	7
W1UBG	897	39	23	13
KC1BS	806	31	26	10
N3GLE/T	780	39	20	9
VK2BQQ	765	45	17	24
KA1IFE	726	33	22	8
NF1J	720	30	24	4
W1KHQ	646	34	19	4
N8IRS/T	612	36	17	14
W1UDB/4	594	33	18	7
KB2GKY/N	570	30	19	17
KA0SIX/N	546	42	13	24
KB4YBR/T	532	38	14	13
K3ZMO/T	495	33	15	10
KB0ANP/T	468	39	12	13
WA3SDV	432	27	16	6
W3GBG	425	25	17	11
WB9B	425	25	17	3
N9BU	378	27	14	24
WB6SMX	250	50	5	24
WA8IMF	240	20	12	7
ND7A	221	17	13	1
K5EJL	204	17	12	3
WD0E	165	15	11	6
WS7U	90	10	9	1
KB7FNI/T	88	11	8	6
W5QBC	80	10	8	6
N0ISE	56	8	7	1
N3DIZ/T	30	6	5	3
KC4HIU/T	9	3	3	1
KA9MAB/T	3	3	1	2

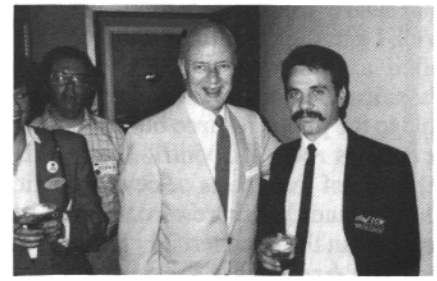
HIGH POWER VE/US

NG7P	73728	768	96	24
K6LL	72447	779	93	24
KT1N	69102	698	99	24
W3LPL/W3EKT	66255	631	105	24
WS7I	52380	582	90	24
WA7EGA	48720	609	80	20

	SCORE	QSO	MULT	HRS
AA4TH	47437	533	89	24
WF5E	47168	536	88	24
K2NJ	41322	426	97	24
KE0KB	41308	449	92	24
NJ0M	41124	447	92	24
N6GG	41085	495	83	20
W8MQK	35061	403	87	22
K6WZ	33726	462	73	24
KC2FD	30030	385	78	24
KB2VO	28026	346	81	18
AB8K	22640	283	80	18
KB6IC	19108	281	68	24
WA2IKL	16215	235	69	24
N8ABW	14760	246	60	17
W1BYH	14256	198	72	24
W1IHN	13064	184	71	24
W8PBX	11830	182	65	14
K0CV	11457	201	57	24
W7MI	9900	150	66	17
W6MTJ	8640	144	60	23
WB1GSO	6804	126	54	15
NQ0I	6174	147	42	8
KE2CG	5700	100	57	16
WA0OUI	5490	122	45	19
W2YRH	5460	105	52	24
W9HLQ	5130	114	45	24
W7IMP	4576	88	52	16
W2JGR	3900	100	39	8
N9HZA	3828	116	33	13
K0WM	3774	111	34	8
W3GU	3772	82	46	10
K5KLA	3552	74	48	11
W6IWO	3471	89	39	9
W1AX	3285	73	45	4
VE3JAN	2496	64	39	19
AA4CK	2262	58	39	5
KD2L	2244	68	33	6
WB8WTS	2142	63	34	3
K9VQK	2124	59	36	8
KD2BW	1736	56	31	9
W9FXV	1624	56	29	24
W0ITV	1242	54	23	24
N3DLM	798	42	19	9
KA2AEY	735	35	21	7
WB2MBQ	672	28	24	24
K1ZZ	640	32	20	2
K2BO	504	28	18	24
W7KB	315	21	15	4
W3KV	272	17	16	24



Raul, HK1LDG scored 42,390 in 1988 RTTY ROUNDUP CONTEST



Eliz, DL2KCE - Warren, K2UFM - Ken, K6IR - Jacky, F2CW/TT8CW

Richard Polivka, N6NKO
7052 S. Freinds Ave. Apt. J
Whittier, CA
90602

PACKET

HOORAY

This ought to satisfy that overworked, stressed publisher that has to do all of the work of putting out this magazine. I now am typing this on a IBM compatible computer. So, now all he has to do is load a disk in and feed it to the typesetting program. I have made his life easier now that he does not have to type in the article from me. This machine is nothing really worth writing home about. It is genuine(!) IBM PC-1 computer with 64K of onboard memory. There is a memory expansion card in it to give me 448K of usable memory, a 20MB hard drive that is 80% full already just with software and 2 floppy drives. It is not in a case yet but that will be the next investment. It has been fun getting this system up and running so I will be spending some of this article on computer usage and some problems that can crop up when using a computer on Packet and offer some suggestions on how to cure some of life's basic woes when it comes to these machines and continuing it for several issues.

TELIX

One thing when you use a computer in any kind of communications is deciding on what program you should use. Should I buy one or use one that is shareware or in the public domain. Well, I am using one that would be classified as shareware. Shareware is a classification of program that is available to the public for free but the author or authors request a contribution to offset some of their costs of developing it. I have found that shareware tends to be better than the commercial programs in several areas. As an example, SEAware sued PKware over the use of the file extension .ARC and being able to write and read files in their format. Well, I will say that the PKARC and PKXARC programs are faster than the commercial versions that I have seen and easier to use. Needless to say, PKware lost that one so they came out with an archiver which is still better than commercial versions. So, that is why I look to the shareware market before the commercial market first when looking for software as a rule of thumb.

The program that I use for data communications is a program called TELIX. It is shareware and it is put out by a group in Canada. Question is, where do I start in describing it. Well, it will run on IBM compatible machines and is great to use both on Packet and over the phone line. It also supports a script language that is similar in style to the programming language C and can be used for implementing protocols, automated batch communcations processing and the like. One example of using it, as it comes on the distribution disk, is the Host mode. That is where you can leave your computer on line and use it remotely. It was written in the script language. One of the nicer things that I have found is the amount of communications protocols that it supports directly. It can upload and download in these formats: Xmodem-1k, Xmodem-1k- g, Compuserve Quick B, Zmodem, SEAlink, ASCII, Ymodem, Ymodem-g, Telink, Modem7, and Kermit. Now comes the fun part, it will also access four other user defined protocols also for downloading and uploading. I have added Pmodem that was written by Skip Hansen, WB6YMH and Mike Hasenfratz, WA6FXT. That program allows binary transfer of files over Packet. It is accessible from the internal menus and is controlled by batch files. In this case, I could have had it controlled by the script language instead. Unfortunately, I have had little luck in using the internal protocols on Packet except ASCII. Maybe that could be caused by me using a slow machine but I have no way of testing that now so don't hold me to it that they don't work. They don't work in my situation but they may work in yours.

There is also a dialing directory in it which I have set up to be able to store amateur calls instead of phone numbers so I can just call up people one after another by specifying a calling string. It is a great time saver. There is more to cover on it but it would take several issues to do so. So, I suggest that you hunt up a copy of TELIX 3.11 and go over it. The documentation for it alone is around 300K and is quite extensive. And if you do find it useful, as with all shareware, send in the contribution and let's all be fair about it.

Telix may be available on one of your local BBS systems, either phone or Packet hopefully in an archived format. If not, you can write directly to the group that did the writing of the program. Their address is: Exis Inc. / P.O. Box 130 /West Hill, Ontario, Canada M1E 4R4 The Evaluation Disk goes for $10.00 and does not include registration. The full package of disk and registration is $35.00. Not bad considering I saw a shareware package that had a $50.00 registration fee and is being advertised for $70.00 in a publication. So, $35.00 is cheap and I think well worth it.

MAIL

Here is an interesting request that I am sure someone out there could help on. Rick Keefer, WB7EJD, in San Diego is looking for software that will turn his Commodore C-128 into a Packet BBS using a MFJ 1274 TNC. Worthwhile reason, he wants to put up a BBS dedicated to AMSAT. This would be a BIG help because at this time, AMSAT has only a phone BBS.

Here goes another one for the soapbox. I do not like purchasing or acquiring something without a manual for its use and/or operation. That is why I like software to come with detailed instructions on how to use it. Well, it seems that I have had several requests by several amateurs, especially one who was rather miffed at the lack of available documentation, concerning the DIGICOM64 package. They were all looking for a copy of the manual for it. The manual that I had described in an earlier issue was the "DIGICOM 64 OPERATIONS MANUAL" compiled and edited by Bernie Fuller, N3EFN and the technical advisor for it was Rick Silverio, WB3JDI. The copy that I have is the 1st edition printed in April, 1988. In the manual it does not list the cost but either one of the authors can be contacted by you or better yet, you could send a letter for information to The

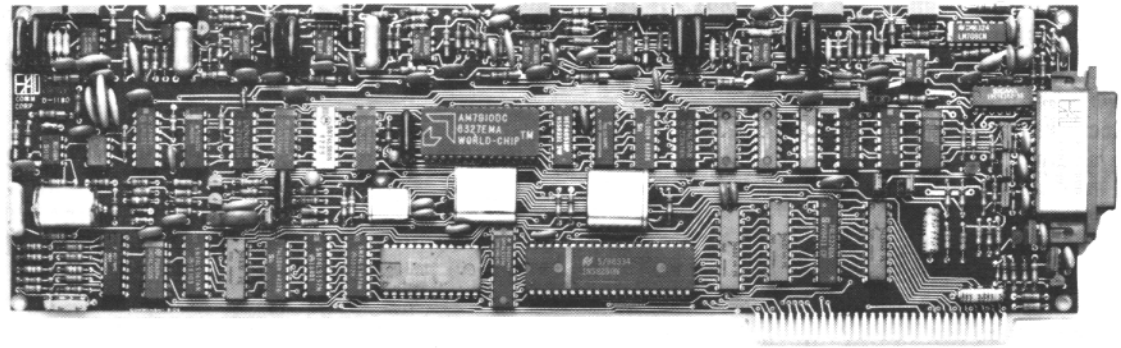
Continued on page 14

COMPLIMENT YOUR PC . . .

WITH THE BEST!

PCI-2000

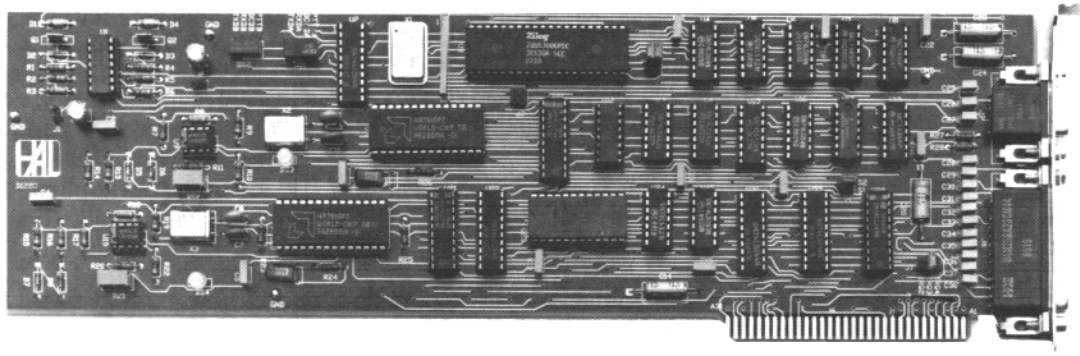
PERSONAL COMPUTER INTERFACE



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

HAL Communications Corp.
Post Office Box 365
Urbana, Illinois 61801
Phone (217) 367-7373
FAX (217) 367-1701

STEP UP TO THE BEST, STEP UP TO HAL!

PACKET continued form page 12

Crawford Amateur Radio Society, P.O. Box 653, Meadville, PA16335. That should steer you in the right direction and will give credit to the people who wrote it. Mention you read about it in the RTTY Journal.

HIERARCHIAL FORWARDING

There is a new way of forwarding out in the Packet community and it is called **Hierarchical Forwarding**. The idea is to have four sections in the forwarding line to go from a large area down to a small area. As an example, for here it would be #SOCAL.CA.USA.NA which means SOuthern CALifornia,CAlifornia, United States of America, North America. Here is a thought for all of you people out there who use TCP/IP at work or at home, reverse the order and what does it look like? It looks like the IP addressing scheme backwards in order but nevertheless the same. Reinventing the wheel....maybe, but a good idea for forwarding. I personally like it going from a larger area to a smaller area but oh well.

The breakdown is as follows:

CONTINENTAL DESIGNATION

NA	North America
SA	South America
EU	Europe
AS	Asia
AF	Africa
AU	Australia

I think that they left out one continent, Antartica. Oh well.

COUNTRY DESIGNATION

ARG	Argentina
AUS	Australia
AUT	Austria
BEL	Belgium
BMU	Bermuda
BOL	Bolivia
BRA	Brazil
BRN	Brunei
BGR	Bulgaria
CAN	Canada
CHL	Chile
CHN	China
COL	Columbia
CRI	Costa Rica
CUB	Cuba
DNK	Denmark
DOM	Dominican Republic
ECU	Ecuador
EGY	Egypt
SLV	El Salvador
FIN	Finland
FRA	France
PYF	French Polynesia
DDR	German Democratic Republic (East)
DEU	Federal Republic of Germany (West)
GRC	Greece
GRL	Greenland
GTM	Guatemala
HTI	Haiti
HND	Honduras
HKG	Hong Kong
HUN	Hungary
ISL	Iceland
IND	India
IDN	Indonesia
IRL	Ireland
ISR	Israel
ITA	Italy
JPN	Japan
PRK	North Korea
KOR	South Korea
LBN	Lebanon
LIE	Liechtenstein
LUX	Luxembourg
MYS	Malaysia
MEX	Mexico
MCO	Monaco
MAR	Morocco
NLD	Netherlands
NZL	New Zealand
NIC	Nicaragua
NOR	Norway
PAK	Pakistan
PAN	Panama
PRY	Paraguay
PER	Peru
PHL	Phillipines
POL	Poland
PRT	Portugal
ROM	Romania
SAU	Saudi Arabia
SGP	Singapore
ZAF	South Africa
ESP	Spain
SWE	Sweden
CHE	Switzerland
SYR	Syria
TWN	Taiwan
THA	Thailand
TUR	Turkey
GBR	Great Britain
USA	United States
URY	Uruguay
SUN	USSR
VEN	Venezuela
YUG	Yugoslavia

As far as I know, only W0RLI V7 or higher and AA4RE V2.0 or higher will support this type of forwarding. If you are to send any long haul traffic, please use this scheme. It will make the forwarding easier.

NetRom vs. TheNet

With all of the bruhaha concerning NetRom and TheNet, about the only similiarities that I can find with what I have on the two, which by the way is not much, is that both names have six letters and that the first and fourth letters of each name is capitalized. All I have been hearing, after sifting through all of the missives that people have written concerning what they think, is hearsay and innuendo. So, I will not voice an opinion on this except that in any market, people will strive to make a better mousetrap for less and sell it for less to gain market share. Now how one goes about building a better mousetrap is left up to them. I will let them battle it out and I am sure that there will be a Phoenix arise out of this somehow. Now in what form it will take, I do not know. I am just going to sit back and watch.

NEXT IN LINE

Next month, we will start covering a new program called LAN-LINK that has been out for a while now and it looks interesting. Also, KA9Q released a new version of his TCP/IP package for Packet and I will start digging into that also. That release is being distributed by Tucson Amateur Packet Radio. They need four 5 1/4" DSDD disks and some $ for shipping and handling.

If you are sending me any mail, either by the postal service or Packet, please let me know what your home Packet BBS is. And in respect to that, you can send items to me at N6NKO @ WB6YMH-2#SOCAL.CA.USA.NA.

73 and 88 to the YL's **de Richard** @ N6NKO@WB6YMH-2#SOCAL.CA USA.CA. or Packet IP addr:. [44.16.0.114]/N6NKO-3 @ N6NKO.AMPR.ORG (ED: do not use spaces as shown above) ■

HITS Continued from page 2

simple but sophisticated systems in harmony on the same frequency. However, now all of a sudden a new group of SYSOP's have come upon the scene and each of these system operators has claimed his own frequency some where in the twenty meter band. I have been told there are upwards of five new systems in operation on twenty meters now all on different frequencies. I don't think I need to tell you what is going to happen to twenty meters if this continues. But not only are they new, their systems are filled with all kinds of unnecessary jibberish including beacons that do not contribute in any way to a succussful MSO operation. These systems are operated the same way in which BBS's are operated on the phone line system which in no way is similar to what has been used on Ham bands for years. Something needs to be done, my digital friends!

During my recent trip to Dayton I met with Paul Newland, AD7I who has been selected by the ARRL for an Ad Hoc committee to look into this very problem. Paul is trying to organize a group of Hams to help him with input about what can be done about this situation. If you have some ideas and would like to express them, please send them to me and I will forward them on to Paul. Paul has a heavy burden here and whether or not he succeeds in getting support from the ARRL is I'm sure directly dependant on our support.

Until next month. **de Dale, W6IWO** ■

1989 CQ MAGAZINE/RTTY JOURNAL WORLDWIDE RTTY CONTEST RULES

CQ magazine and the RTTY Journal proudly announce the third annual Worldwide RTTY Contest. The first two contests were a tremendous success thanks to all who participated. Since worldwide acceptance has been outstanding and with conditions improving we look forward to another great turnout this year. If you have never tried a contest before and if you like to work DX, then now is the time to start. It is real easy and the DX turnout will astound you. Join in on this special weekend, have some fun and work a lot of DX. Maybe you will work enough for WAZ or even WAC if conditions are good. Here are the rules.

CONTEST PERIOD:
0000 UTC September 23 to 2400 UTC September 24, 1989. The total contest period is 48 hours but no more than 30 hours of operation is permitted for Single Operator stations. The 18 hours of OFF time can be taken any time during the contest period but OFF periods may not be less than 3 hours. All ON and OFF periods must be clearly noted on the LOG and the SUMMARY SHEET.

Note 1. A Single Operator station may operate more than 30 hours but only the first 30 hours of operation will count towards the official score

Note 2. Multiple Operator stations may operate the full 48 hours.

OPERATOR CLASS:
A. Single Operator B. Multi-operator (must be all band entry only with only one transmitter signal at one time)

ENTRY CATEGORIES:
A. All Band B: Single Band

MODES:
Contacts can be made using Baudot, AMTOR (FEC/ARQ), ASCII, and AX.25 (No digipeating allowed)

BANDS:
3.5, 7.0, 14.0, 21.0, 28.0.

VALID CONTACTS:
A given station may be contacted only once per band regardless of the digital mode employed. Additional contacts are allowed for each of the other bands.

EXCHANGE:
Stations within the 48 continental United States and the Canadian provinces must transmit RST, State or VE area and CQ zone number. All other stations must transmit RST and CQ Zone number.

COUNTRIES:
The ARRL DXCC and WAE DX Country lists will be used. Please note that USA and Canada count as Countries.

QSO POINTS:
One (1) point for contacts within your own country. Two (2) points for contacts outside your country but within your own continent. three (3) points for contacts outside your own continent.

MULTIPLIER POINTS:
One (1) multiplier point for each continental US state (48) and each Canadian province (13) contact on each band. One (1) multiplier point for each DX country contact in the ARRL DXCC and WAE lists on each band. KH6 and KL7 contacts are considered country multipliers not state multipliers. Also US and Canada count as country multipliers for the first contacts on each band. One (1) multiplier for each QSO zone worked on each band with maximum of forty (40) per band. Canadian areas are VO1, VO2, VE1 NB, VE1 NS, VE1 PEI, VE2, VE3, VE4, VE5, VE6, VE7, VE8 NWT, VY.
FINAL SCORE: Total QSO points times the total multipliers equals the total claimed score.

CONTEST ENTRIES:
All entries must include a SEPARATE log for EACH BAND and a DUPE SHEET for each band if the total contacts for that band exceeds 100. A MULTIPLIER check list for EACH BAND and an OVERALL summary sheet must also be included. All logs MUST show date, time in UTC, callsign of the station worked, RST exchanged, State or Canadian area (where applicable), CQ zone and points claimed per contact.

DISQUALIFICATIONS:
Operating in an un-sportman like manner, manipulating scores or times to achieve advantage or failure to omit duplicate contacts which would reduce the overall score more than 2% are grounds for disqualification. Decisions of the CONTEST COMMITTEE will be considered final.

AWARDS:
Plaques will be awarded to the first place winners in each of the operator classes. Certificates will be awarded to second and third place winners. Plaques will be awarded to the first place winner in each continent. Certificates will be awarded in each US and Canadian call area. Certificates will be awarded to the first place winner in each DX country.

LOG and ENTRY FORMS:
Sample log forms and summary sheets are available from CQ magazine or the RTTY Journal, please include appropriate postage and a SASE (stamps or IRC's accepted). Note on the outside of your envelope that you are requesting CQ RTTY contest logs forms.

DEADLINE:
All entries must be postmarked NO LATER than December 1, 1989. An extension may be given only on written request. Logs should be mailed to:

CQ /RTTY Contest
c/o Roy Gould, KT1N
PO BOX DX
Stow, MA 01775
USA.

John Troost, TG9VT
POB 296C Vista Hermosa
Guatemala City, Guatemala

DX NEWS

A LITTLE TRAVEL TIME!

A lot has gone on this summer, and it seems ages since I wrote the last column for the JOURNAL. Dayton seems long ago, but it was a great gathering, and good to see all the old friends again. The RTTY dinner was not only good food, but a bunch of great guys, and it was wonderful to see some well know DX there, such as DL6JC, XE1L, HI3ADI, HC5K and a few more.

Anyway from Dayton I went to Europe and visited I5FLN and his family and friends. Luciano was a great host and I felt much at home in Florence with him and Sandra, I5HGV and their two kids, and with Clelia, I5ICY and her husband Francesco, I5IGQ and Paola, IK6DVI, lovely people.

After that a visit to Budapest, where HA5CP, Gyuri was my host and had a nice visit to the Central Radio Club where I was given permission to operate as TG9VT/HA5. Great bunch of guys! Lovely City!

Back home and I found that the bands were kind of funny: peak of the solar cycle, yet pretty poor propagation on all bands in the daytime, but at night everything was open; including 10 and 15 Meters.

DX NEWS TIME!

And there was some great DX off and on. In May there was T33RA, T27RA, KH8AH, 3D2YY (Rotuma), KC6MA and KC6TY (both in Palau, see pictures in this issue), A41KC, ZD8MAC, TK/DL7HZ, UH8ABM, 7X2CK and ZY0SY. In June there were, amongst many others: UA3TT up from RF1F and RG1G, TZ6MG, A35SA, T77J, T28RW plus a short appearance of T5MF. In July we saw such goodies as 9J2AL, S79D, WA4ZEL/JW, UZ4FWD operating from UI8U and UH8W, JT1KAI (WFWL), 3D3HL (Conway), UC1AWW and even a TJ1DL is showing up from time to time on 10 and 15, seldom in Baudot, mainly FEC and ARQ.

And of course, I am writing this on the 30th of July weekend, and by the time this gets into your hands, a lot more goodies will have been seen. Like HD8S, from the Galapagos, operated by KB2VO in the SARTG Contest, with a new set of 110 foot high monobanders. That will tell you what HC5K plans to do for the CQWW in September. And 9M8STA on 5 and 6 August.

Best way to stay in touch with the current happenings, is to pick up the weekly DX NEWS prepared by DX1 (VK2SG). Readily available on any Packet network or on the RTTY mailboxes on 14 085 625 Mark, or on the various AMTOR boxes. Best up-to-the-minute DX tips are available there, with the cooperation of active DXers all over the world.

DX COMINGS

5Z4BH, Rod, has received his portable Tono from Gin, JA1ACB to take with him on his trips, and he hopes to be active from 9X, 9U and D68, plus maybe a few other rare ones in Africa. We still hope that he may obtain permission to activate T5 in Somalia, as the Italian operators there don't seem to have much affection for RTTY. And licensing seems to be opening up a little and the rumor is that N4CT has been licensed as T5CT. He is with the U. S. Embassy.

The same Norwegians, who activated Peter I in 1987, LA1EE, LA2GV, joined by LA6VM, are planning to operate from BOUVET ISLAND in December 89. As they still have the Tono 5000E, which Gin San donated to the Peter I Expedition, it is expected that they will be on RTTY. I have heard of "Needy DXers", who have pledged $1000.00 support to this operation, which is entirely financed by the operators. And by needy DXers, I don't mean that they need money, they need DX.

And Alex Lebedev, UL7PCZ, RTTY operator of RL8PYL wrote me a letter and sent a photo of the recent 3W1A operation in Vietnam (see Cover Story). The letter is published in this issue and talks about his plans for activating all those rare ones, which have not been heard for years, and never on RTTY, including 70: South Yemen, XW: Laos, XU: Cambodia and recently he told me that S2: Bangladesh, would be included in that trip, possibly in December '89.

Luiz, S92LB: Sao Thome has received Tono RTTY gear from Gin San, JA1ACB and a monitor from Luciano, I5FLN and is getting technical preparation on SSB from Anton, PY2FR to get the gear hooked up and activated. So watch for S92LB to be up on RTTY, as an **All Time New One** any day soon.

J52US: Guinea-Bissau, continues to be very active on RTTY, but will QRT late September, and then will probably be active from 9L, SIERRA LEONE just about in time for Christmas '89. Those of you, who met him in Dayton, will now realize that Dave's outstanding skill in RTTY is only exceeded by the beauty and charm of his attractive bride.

OD5NG: LEBANON, Tom, continues to be very active and is planning on the CQ WW RTTY Contest in September. Tom can be found on 20 Meters normally weekends, after about 0300Z. W3HNK is now his permanent QSL Manager, and as Tom has no normal postal service (neither do I, as since 2 months we have a postal strike in Guatemala), he sends me his logs weekly on ARQ and I verify for Joe, W3HNK on SSB.

SU1EE seems to have left Egypt and will be assigned to ZAIRE, 9Q5EE, he hopes, in the next few months.

HV3SJ: Vatican City, operated by I0AOF and I0DUD, continues to be very active, mainly on weekends. Gear, a Tono, was donated by Gin, JA1ACB.

A Finnish group, with Raimo, OH3BGD as RTTY operator, was planning to operate from CONWAY REEF in October or November. However, that 3D2HL became active late July was not anticipated, and in fact it was a great surprise to all of us. But this has forced the Finnish group to reexamine their

Continued on next page

DX NEWS Continued from page 16

plans, and are now considering ZK3: TOKELAUS, which would be great, as Yama was unable to get on the air from Tokelaus or ZK2: NIUE this year, but he did his fine job from Rotuma and American Samoa. Plus there was a S1IM operating as ZK2YY in late May.

Sorry, have no idea of whatever happened to Joe, 7J1ADJ and his announced OGASAWARA Expedition. He did not show up as planned, so probably the third delay... hope for the CQ WW in September.. hawr! But Toru San, JG1RVN (KC6TY And BV0RY) told me some time ago that he is planning OGASAWARA in September, if his boss will give him the time off.

There have been various reports of CHAGOS being active, VQ9ZZ and several others, on FEC only. I am told that their QSL card shows that the contacts are made from a Naval Vessel; in the Chagos Lagoon, and thus not valid for DXCC, being Maritime Mobile.

AA5AU and W6/G0AZT had to cancel the planned CY0, St. Paul Island Expedition. There was just not enough money to hire generators and pay for a boat, which was trying to hold them up for gold, and finally the VE partner had to pull out, so after months of effort and planning the whole thing fell apart. Now Eddie is planning another expedition, so those who have contributed to the total of $300.00 in support he collected, please don't get excited. Eddie has another rare one up his sleeve and the money will either be repaid or put to good use (in DX-peditons that is).

There continues to be a fair amount of activity from JT1KAL, MONGOLIA, but there is some controversy if he is "for real". At the time he was using the call of JTKAA, but recently is has been just JTKAI. He says to QSL to POB 146, Kursk, 30,5000, USSR. A rumor has it, that in Germany someone has received a card from him, but the beam heading does not always look right for JT1. Look Sunday mornings Zulu around 0100 on or about 14 083 Mark. Also a station signing JT2QIT has been reported.. Well, WFWL! and besides that, Alex, UA9YAB reports that he will be going to Mongolia for an expedition in February/March '90 and will be taking RTTY gear.

VE3JPC reports that he will be trying for SENEGAL, MAURITANIA, GABON and the GAMBIA in the October/November time-frame, possibly followed by an attempt at LESOTHO early in 1990. Of course with RTTY gear!

There was a report of ALBANIA, ZA1ZA on 24 July at 18:30 Z, purportedly testing gear for ZA0L. No further details or QSL information... but I would like to be surprised: but I doubt that it will happen.

HZ1AB is on RTTY again from SAUDI ARABIA with new gear and a nice signal.

Nothing has been heard on RTTY from MARION ISLAND, ZS8MI, though he does have gear with him, but there are rumors that he has been sighted on Packet.

N5IR will be up from ICELAND in late September: no call sign yet.

And finally, it seems that the planned operation of I5DEX is in doubt. Given the current situation in Namimbia and Angola, it appears that the government of Italy is about to decide not to send replacement troops for rotation to ANGOLA. They don't know what their priorities are: I5DEX was part of the new contingent, and RTTY should be the top priority for anyone.

RAMBLINGS

Well not all news is good news. Walter, DJ6QT lost his 18 year old son in a car accident mid July. You name it and Walter has been there on RTTY to give you a new one, and I was a guest at his house once last year, and he at my QTH for the CW WW SSB Contest last year, and I met his only son, so I really grieve for Walter, yet he will give the CQ WW RTTY Contest a try this year, from 4U1ITU or 4U1VIC, or possibly Jersey or Guernsey Islands. (Note: In the CQ WW RTTY Contest, 4U1VIC counts as a multiplier, as do Sicily and a few more spots, per the WAE (Worked All Europe) List. Both DXCC and WAE count as multipliers.

It is a pity and a big disappointment to the gang that ZY0SY had computer problems after making a few contacts on RTTY from ST PETER and PAULS' ROCKS. Karl made 37 RTTY QSO's, of which 25 were with the U.S., when a power glitch from the generator blew out his computer. A big disappointment, most of all to Karl, who had gone thru the terrific effort and cost of getting the expedition to this remote inaccessible spot organized. I have written Karl for pictures and a story of the happenings, so that I may share them with you, but the mail strike here has probably gobbled up his reply and QSL. But the SSB and CW operations were a big success: tough! Maybe next year.

WCRDXA

You may have heard before of the West Coast RTTY DX Association. These are the people in Southern California, who try to assist DXpeditions which use Digital Modes. They lent a HAL Telereader to the last July Conway Expedition, they have activated T32BG last year, they convinced ZS8MI to bring RTTY gear (not done much yet), and they lent gear to KH7/KH6JEB to bring Kure Island up on RTTY. They also brought Tom Christian up on RTTY from Pitcairn Island, VR6TC by giving him a Robot 800 on "permanent loan".

They are a great group, and well worth supporting. If you wish to help, get in touch with Don, W6PQS. As their non-existing by-laws state, "You become a member for life by being observed in an RTTY DX pile up. There is no way to get out!" Plus their news sheet is informative and funny and membership is $0.00 per century.

Yes, there are a number of people and groups who help Dxpeditions get on RTTY and amongst the outstanding are the West Coast RTTY DX Association and of course JA1ACB, Gin San, who lends many people a Tono, whether he needs the country or not. thanks all of you from the bottom of my heart.

NEW PROPOSAL

A rather disquieting article appeared in the ARRL Packet newsletter "GATEWAY". It quotes from a German publication called "CQ-DL" and says that the

Continued on page 19

Hal Blegen, WA7EGA
12910 E. Broadway
Spokane, WA 99216

CONTESTING

THE ANTI-AUDOBON SOCIETY

I hate birds! I'll admit that up front. The little suckers have no discipline. They come and go as they please, perch anywhere they feel like and generally maintain a maximum nuisance profile. They have so far resisted even my most persistent efforts to chase them off. Not only do the nasty little warble noises they make give me headaches but by invariably picking the most destructive places to nest, they have reduced my antenna systems to the effectiveness of a dummy load. I hate birds!

I love my new computer! It's faster, never seems to run out of program memory and the hard drive provides virtually unlimited data storage. The color screens are easier to read and I am mostly addicted to a lot of fun software that won't run on my old systems.

But when I turned on my receiver it was like discovering that half the raisins in my breakfast cereal had six legs-- BIRDS! High clock speeds and better screen resolution (color is worse yet) makes copying anything weaker than S5 through the warbles almost impossible. In contest configuration, with one computer running terminal software for RTTY and another handling the fancy, new logging program, the HF spectrum becomes a whistling blizzard of birdsong. It's particularly awful on the higher bands where ground wires and control cables approach resonant lengths. The petrified doughnuts help but even with torrioids on all data lines, 10 meters still sounds like a country meadow in springtime.

By removing all connections except monitor, keyboard, AC-power and ground, sanding all connecting cabinet edges to bare metal and using unpainted screws for re-assembly I cured the logging computer. But when I hooked the interface cables back to the COM ports, it became a matter of my tolerance level for nuisance. I figured a weak bird in the wrong place was as unacceptable as a band full and put all that dynamite terminal software back on the shelf. Incidentally, terminal units that contain microprocessors for bit banging and for code conversion are themselves part of the noise problem.

Compatibles Not Clean!

I have tried Atari, Tandy, and a couple different kinds of clones with no joy. I suspect that the fine HAL Communications may have engineered a way around the problem but none of the of-the-shelf PC compatibles I tried were clean. For a cure, I finally returned to the old Commodore 64. While this may seem to you (as it did to me), a giant step backwards, it was the only affordable computer I tested that had no RFI and yet offered all essential operating and buffer features for contesting.

A local TOYS-R-US sells new C-64's for less than $130. The latest version is the best shielded, stock computer I have ever used. Even fully interfaced to the TU and transmitter (but no disk drive), there were zero birdies. The only challenge is finding acceptable non-disk, software.

Rich Perdue, the Amateur Sales Rep. for AEA, explained that the old the MBA-TOR cartridge is no longer in production. AEA's current offering for the C64 is a two cartridge set for the PK232. Although supporting all-mode operation (including FAX), the RTTY portion of this software has little or no similarity to either MBA-TOR or to the newer, PC based, AEA PAKRATT.COM. Having used all three, I think the old, MBA-TOR/CP1 combo is superior for both contesting and DXing but if you are already running a PK232, putting up with an aviary and tired of tying up a $1500+ PC for RTTY, the new AEA cartridges for C-64 may be a quick fix.

A few phone calls unearthed at least one outlet who still have a few original MBA-TOR cartridges ($70, Missouri Radio 1-800-821-7323). They even had a couple CP1s left which together with the MBA-TOR are a nice package for the Commodore.

The C-64 does have a couple of drawbacks. The un-socketed, input/output chip likes TTL and is a snowflake if you fumble the interface voltages, particularly if you apply the -12 volt, RS232 data found on the outputs of most modern terminals. Although replacements are available in the $14 range if you smoke it, installing a socket without butchering the circuit board isn't easy. The other weak point is power supply overheating. It seems to run even warmer with the computer off so when not in use, remove the 110 AC instead using the switch on the keyboard.

RESULTS OF THE ROUNDUP

Last January the ARRL sponsored their first keyboard contest. THE RTTY ROUNDUP immediately moved into a dead heat with the CQWW for the honor of most popular RTTY contest.

NG7P's high-powered effort from Lake Stevens, WA. netted the honors for overall winner. Although awards for this 24 hour contest are awarded by ARRL section, Earl's 768 QSOs and 96 multipliers earned him world, top score. It was close at the top. Only two multipliers separated NG7P from 2nd place winner, K6LL, a relative newcomer to RTTY contesting. Another well-known RTTY competitor, KT1N placed third in a field of over 300 logs submitted from 39 countries and 49 states.

AA5AU was first-world, low power station using a ground-mounted, 5-band vertical and 100 watts. K2BMI/VP2V had a higher rate but missed some multipliers for 2nd best overall. He was top DX score in class. Third, overall, and second place in the W/VE low power, went to NT0V.

Ron, KP2N, was the number one DX station with 550 QSOs. "The caliber of operation has greatly improved," he said, "I worked only 3 stations who sent a string of RY's!" Ron is currently in the process

Continued on next page

CONTESTING Continued from page 18

of putting a CQWW effort together from the KP2A contest site for this fall. HK1LDG was second followed by OK2FD in the hi-power, DX classification.

K2BMI/VP2V followed by 4M5RY (operated by YV5KAJ) and HI3ADI were the top stations in the 100-watt DX category. Of six Canadian logs received, VE6ZX was notable with 405 QSOs followed by VE3UR and VE6BS.

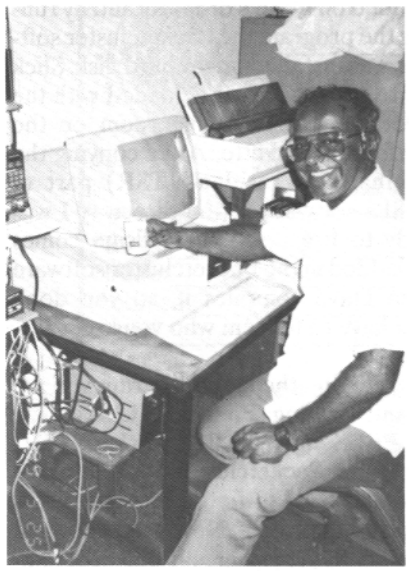
The team at UZ9CWA earned the top multi-single slot with 315 QSOs while WA0VQR (with N0BG) placed second followed by N2DCP (+N4TSV) in third.

These are the world standings, not broken down by country or power. The ARRL certificates will be awarded by section, class and continent.

Good luck to all in the coming SARTG 19-20 August and hope to see everyone out for the CQWW in September.

73's Hal, WA7EGA ■

RTTY ROUNDUP CONTEST RESULTS ON PGS. 10 AND 11



KC6MA, assisting at KC6TY, likes RTTY, lacks equip, see DX

DX NEWS Continued from page 17

new HF Packet Bandplan for IARU Region 1 (Africa, Middle East, Europe, USSR, and Mongolia) recommends the following sub-bands for Packet: 3.590-3,600, 14,089-14,100, 21,100-21,120, 28,120-28,150 and 29,200-29,300 MHz.

What happens to 20 Meter RTTY? Is there just 9 Kc left, less the Beacon Mailboxes? Hope that was an April 1 joke. The incursion of Packet in the 20 and 15 Meter RTTY sub-band is bad enough now. Both 14,095 and 21,095 are now normally occupied with Packet. Don't let us legalize those incursions. But if we don't use the portions above .095 for RTTY, that is bound to happen.

Summer is about over and, in spite of bouts of poor propagation, has given us a rewarding crop of DX. Hope that all the good things, promised for the Fall and Winter, actually happen.

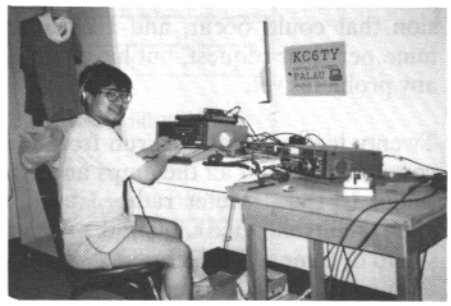
Thanks for this month' column go to VK2SG, I5FLN, OD5NG, JA1ACB, W6PQS, W7MI, W2JGR, W6/G0AZT and the many others, who have made it possible for my word processor and spelling checker, to configure this month' DX news.

Stay clear of the Beacon mailboxes and may the Good Lord bless you all with DX and other spiritual things, and may all your QSO's be "New Countries" on RTTY, of course.

If you need my help, or just want to chew me out, I now have a home phone 24 hours per day via a 2 meter private patch: 520-2-340169.

73 and DX de John, TG9VT ■

DON'T BE A BEACONITE!



Toru, JG1RVN operating station at KC6TY - Palau

COVER STORY

Hello Dear John,

I glad to write a letter with any information about our 3W DXpedition. Think that you need info's especially about RTTY worked.

DXpedition started on 30 January 1989 with members of RL8PYL: UL7PAE (Al), UL7PCZ (Alex - RTTY Operator), RL8PY (Yuri) and RL7GK (Vick).

RTTY used call 3WIA. First QSO was made 31 Jan at 19:33Z on 14 Mhz with OH3SR. The first USA station was WB0QDA.

At 20 days we made about 800 RTTY QSOs with 50 countries. On 14 Mhz was 65% of QSO, on 21 Mhz 20%, on 28 Mhz 15% From all QSOs with USA 22%, Europe 40%, Japan 30%, DX 8%.

We used FT-101Z (Presented by INDEXA) with small PA 250 watts out, Russian computer RK-86 and home made RTTY interface DJ6HP, also small monitor. In FT-101Z had not CW filter and was much problems when many stations calling me. My monitor in this moment was not printing. I worked usually split frequency.

In this DXpedition RTTY job was not very serious. In next times we will have 2 or 3 good transceivers and PA, and RTTY will be much better. Who want to help for next RL8PYL's DXpedition can make donations and send it our QSL manager (in INDEXA) W4FRU.

We have possibility to make DXpedition in XU maybe in this December and in 70, 1S, XW, BY. RTTY job will certain. Also we are planning to go UH and another DX Russian Republic in next Winter.

All can hear our call RL8PYL on the band very often, especially in contests. We used in 1988 year special call RL1P, (SSB & CW). RL8PYL working RTTY since December 1988.

Dear John! I send to you a slide with our team in Vietnam. Excuse me for any mistakes in my English. John! I am waiting for your letter.

Best 73 de **UL7PCZ/Alex** PO BOX 43 Kazakh 472310 USSR ■

Jay Townsend, WS7I
POB 644
Spokane, WA
99210

SOFTWARE REVIEWS

DRSI PACKET BOARD

Gotcha ...Well they finally got me! A group from our local DX club meets for lunch on Fridays, and an argument started concerning the best way to announce DX.

FM simplex on a club frequency is what we had been using. All of the type 'A' personalities seemed to have an opinion. Hal, WA7EGA thought what we were doing was working just fine. Pat, NQ7M, who puts out 80 percent of the DX wanted to increase the number of people listening by going to a repeater. And, unfortunately, or fortunately, I had just finished reading in the (W6GO/K6HHD) DX managers list about the new "Packetcluster" system.

So, of course, I sallied forth with my opinion, and said the best way to announce DX was via Packet. Well, to say the least everyone started picking on me and telling me it wouldn't be any good, counldn't work, etc., etc. Naturally to settle this argument, I picked up the phone to order the AK1A Packetcluster software. No luck, no phone number was found for AK1A. So Betsy, WV7Y, my wife was talked into doing a letter to Pavillion Software. Also we decided that I needed a new Packet TNC and ordered the DRSI dual channel Packet board.

Since DRSI has a 800 number for orders, those folks were quickly reached on the line. They have several options, and I decided on the dual controller with 1200 baud Modem on one port and with one RS232 port for future expansion.

DRSI ships quite fast via UPS blue and I received the board about 3 days later and quickly opened up the box. Having examined many boards lately while putting together a IBM PS/2 for the office, I was quite impressed with the quality of the construction on the DRSI board. It has a nice layout and uses quality parts.

Also included were a couple of pieces of paperwork. The first was a 'lets get started' quickly sheet which is all I ever read these days. It looked like a snap. There was also a slick looking little manual which I put aside.

A surprise was waiting in the package. Bunches of software were included with the board. Not realizing that these were coming, and enjoying presents, I quickly loaded it all up on my Everex AT computer at work. Rapidly I perused the 'README' files and decided that a print of the documantation would be nice. Firing up the laser printer and printing out reams of paper, little did I then realize what was in the slick little book. Ah.. experience.

Included with the DRSI board were a Multi-user software package by AA4RE, a terminal program called THS by HB9CVV, and the standard TCP/IP package. All the aforementioned software is included in the purchase price.

The DRSI board was purchased to work with specific software (AK1A's Packetcluster), but not having received it yet, I just had to try it out. So I took the DRSI board home and installed the board in my little 8088 clone.

Installation is a snap, just open up the PC, snap the board in a slot, tighten down the screw, and close the box back up. It comes pre-configured and usually wouldn't require any changes to the jumpers. The latest release of the board and software is version 1.4 on July 10, 1989. They have changed interrupts to avoid some of the more common collision that could occur, and I changed mine per their request, but haven't had any problems yet.

Twenty feet of cable was run from the computer, behind all the amps and HF radios to the 2 Meter radio. I used a good quality shielded cable with an extra shield of some old coax braid. No interference has been noticed on any bands or modes.

A PC accelerator board from Orchid (286) was tried in the system and had numerous conflicts with the hardware and software, but by careful reading of the manual and documentation I was able to change memory locations and get it to work. Unfortunately we needed the accelerator card back at work and the Packetcluster really didn't need it so I took it back.

Version 1.2 of the THS program had a lot of problems with most Clone printers not printing. Something about our favorite thing in computers (interrupts). The latest version 1.4 of THS seems to have cured this and works fine. Interestingly, the Packetcluster software never had this problem.

DRSI has a new 2400 baud TNC available and I am just biting at the chance to order one up and test it. I think that the Packetcluster as it grows will best expand to 440 Mhz and the 2400 baud speed. For further information on DRSI products (a dandy little catalog) contact them at DRSI, 2065 Range Rd, Clearwater, FL 34625 (813) 461-0204. AK1A's Packetcluster software arrived a few days later, and boy was I surprised. Having spent hours and hours putting together W0RLI, WA7MBL, and the PRMBS Packet PBBS software for the U.S. Air Force MARS system and for Ham usage, I thought I would spend a couple of days or weeks getting things all set up.

A self unloading archive program was included on Dave's diskette, and by running the program the Packetcluster software was installed on my hard disk. Slick way to get the software loaded with the added benefit of saving room on the distribution diskette. After copying the terminal stay resident (TSR) part of DRSI's software to the directory I was ready to fire up. Your callsign comes embedded in the Packetcluster software when Dave compiles it, so you don't even have to tell 'em who you are!

By executing the main program you are up and running. First time I have used any PBBS software that worked!!! The version of Packetcluster was 3.0 and I tried and tried to find a bug...sorry this version was perfect. Now, I am known at work as the Breaker, all our programmers send their stuff over to me to find errors. Indeed, Hal, WA7EGA, always

Continued on next page

SOFTWARE Cont.. from page 20

tests his latest version of the RTTY logging software with me (never have failed to find errors). Grin

AK1A is some programmer! The Packetcluster software has the following features: Multiple users on a single node -- Networking of Packetcluster nodes -- DX/contest multiplier spotting functions -- WWV propagation logging -- User-to-user talk functions -- Multi-user conference ability -- Mail functions -- Bearing/Distance from Prefix Callsign -- Sunrise/Sunset information and MUF calculations from WWV info.

After the first evening of playing with all the features I was hooked on the cluster. In just a couple of days users started showing up on frequency (144.93). Most of the guys started by using old CRT terminals and the cheapest TNC they could find. And after just a couple of weeks several were hooked and buying PC Clones, AEA PK-232's, Kantronics KAM's, and others.

Only two complaints were found with the cluster, we needed to have some database functions by remote users. And the SYSOP screens were sorta terrible. Well I was just getting ready to do this review and low and behold, Dave, AK1A, drops an announcement in my mailbox on version 3.1 of the Packetcluster. An update with guess what? The two things that I found to complain about.

Sending my check off in the mail, I anxiously awaited the new update. In a few days it arrived by priority mail, a nice way to ship stuff from the East coast to the West coast. Ah, finally a bug, the new version crashed whenever jumping out of the program to DOS. Phoning Dave, I started to inquire what the problem was, but alas, he already knew about it and there was actually a fix in the manual which came with the software, but like all of you I hadn't read it yet. Evidently, there was however, a bug or two in the software as he indicated that a fix would be coming 3.2-1 which arrived yesterday. This corrected some problems with the remote use of the database. Well the best news came almost simultaneous with the update, W6GO/K6HHD have an offer to Packetcluster SYSOP's to supply QSL info for inclusion in the Packetcluster database.

QSLing will now be a snap for users of the cluster. And having subscribed to the List for a couple of years I know just how valuable a service this will be. And finally maybe Hal, WA7EGA will quit bugging Betsy to be his QSL manager!!

Pavillion software has just announced the Cluster Companion version 1.0 software which is an application aimed at the users of the Packetcluster. This should be available in August exclusively from Pavillion Software, P.O. BOX 803, Hudson, MA 01749. Information is available from Dave on that product.

Packetcluster software and the DRSI TNC board, both for PC computers are two of the best products on the market for their value, functionality and usage.

Since the introduction of computers into RTTY, contesters and DXers have recognized them as a valuable addition to our shacks. With the advent of the Packetcluster software a further expansion has occurred. We are now going to have to have several of them. Already there is a major group using the spotting software on the West and East coast of the US and the competition in the pile-ups will increase, along with our ability to communicate and have fun. Next month we will examine two RTTY programs for the PC, CompRTTY and DSRTTY. Betsy, WV7Y, Hal, WA7EGA and I will be using the Packetcluster and the DRSI board for extensive spotting in the SARTG contest. Hope to print you all.. and look for us from Ecuador and the Galapagos Islands in September.

Dit Dit de Jay, WS7I ■

ARRL SOUTHWESTERN DIVISION CONVENTION

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

AMTOR

Despite the Summer recess of two months, I am having a hard time, trying to think of something interesting to write about for this issue, so please forgive me, if this month's column is short and not too interesting.

MAILBOX

I would like to thank the following gentlemen for their inquiries regarding rig modifications for ARQ use: WN9PIQ, Ted; WB1CQS, Jerry; W1A1, Bill; W7EQU, Ed; W7DCR, Gary. Although I have not yet seen them on the air in AMTOR, (what color was the smoke?), I hope that they have all done the mods, and will soon be able to savour the delights of ARQ operation. I would also like to thank KEOUV, Greg, for his continued experimentation and success, on how to make the Yaesu FT1O1ZD switch faster than the speed of light and deaden the noise of the relays down to a whisper!

Courtesy of A.E.A. in Washington state and I.C.S. (UK), I now have the complete list of rig modifications covering early model Yaesus as well as the later FT-1 and FT757, Icom IAC701, IC720A, IC730, IC74O, Kenwood TSI3O, TS43OS, TS83OS. TS93OS, TEN-TEC 58OD, Drake T4XB, and TR5. I also have a variety of two meter rig mods, but with the advent of Packet, I doubt if these will be of much use to U.S. hams. If you need any additional info, drop me a line with a SASE, and I will try to help, by return, if possible.

FEC IDLES

There are still many stations calling CQ in FEC, using a buffer or one of the available memories in their software, but who do not have sufficient 'idles' for satisfactory 'sync-ing' with the receive station, unless the receive station is dead on the caller's frequency at the very beginning of the CQ call.

The "recommended" FEC protocol is::

Ten or more idles PRECEEDING any text, followed by each character and it's repetition, (FEC sends each character twice). After approximately 28 characters, another sequence of five idles, then a further 28 characters, and so on.

The reason for these periodic 'idles' during your transmissions., is to allow the receive station, to maintain synchronization with you. If, during a transmission, QRM, QRN or QSB interrupt the flow and you have insufficient 'idles', the receive station is going to miss a fair part of your text. On the other hand, if there are enough idles, you are likely to miss only a very small part of the transmitted text, about 20-30 characters.

Having the correct amount of idles in your transmission, does not guarantee that you will get a response to your CQ call! The band may not be open, your antenna may have fallen down, (heaven forbid!), or you may have picked a bad time to call, everyone else is out to lunch or already in QSO. Check out the above first, then go back to your software and investigate. As most software has audio feedback capabilities to the video monitor, it is easy to check the number of idles.

Switch off the radio, leave the TNC/Modem connected to the computer turn up the audio on the video monitor and send out a buffer type CQ call. Listen carefully to the audio and you should notice a change in the tone and a short period of no text being sent out. Those of you without audio feedback, can just watch the outgoing text come to an abrupt halt for a second or two, then continue and so on. If the above text proves successful, you are home and dry. If not then I suggest that you try typing your CQ call, 'live' from the keyboard, pausing for a second or two after each line of text. Any pause in sending your text, should produce idles, which should ensure correct sync-ing. You may be pleasantly surprised with the results, more first time ARQ links and fewer QRZs.

BAUDOT MARK & SPACE

Idles of a different nature:

Whoever said that continuous Mark and Space tones, diddles, RTTY sync or whatever you like to call them, are not necessary any longer, ought to come and operate from the West coast of the USA. Try to copy legible print from a weak station with Polar flutter, static crashes and slow typing speed. A Mark tone alone, unless the signal is relatively strong, tends to produce lots of alphabet soup with some VERY bad spelling and unintentional typing errors!!

So, if you are DX, PLEASE use the 'diddle' or Baudot Mark and Space tone facility, if you have it.

SYSTEM 64 (RBBS)

A 'touchy' subject to be sure! I may as well jump on the band wagon and express my ten cents worth.

There appears to be a 'feud' developing between a lot of the Baudot operators and the System 64 RBBS sysops. Although these RBBSs are not to everyone's liking or approval, they CAN however, be useful and informative to a lot of users. The primary objection to the SYSTEM 64/128 mailboxes, is their BEACON, which fails to check if the frequency is in use, before it transmits! This form of QRM must surely come under the heading of 'deliberate', whether it is intentional or not.

A simple solution? Why not drop a note into each RBBS, for the attention of the SYSOP, suggesting that they all get together and use the same frequency. The National Auto-start group have been doing this for years, NO BEACONS and everyone who wants to use that system, knows where to find them.

At present there is N8AII on 14.083, KA3NVP at 14.086, WA4NWP at 14.087.8, TG9AXB at 14.088.8 and KD30 on 14.098.8 (all LSB dial frequencies on my TS440S). There may be others??

Some of the advantages of using the same frequency:

1. There would be no need for Beacons. After a few days, all regular users would be aware of the fact that their favourite RBBS is available on a specific frequency. Newcomers would only have to type: //HELP to get the system's modis operandi.

2. If propagation favors one area only, the users would be able to extract whatever information they wanted from the strongest signal in their respective area. After all, most of the SYSTEM 64 RBBSs have the same basic information files in their respective directories.

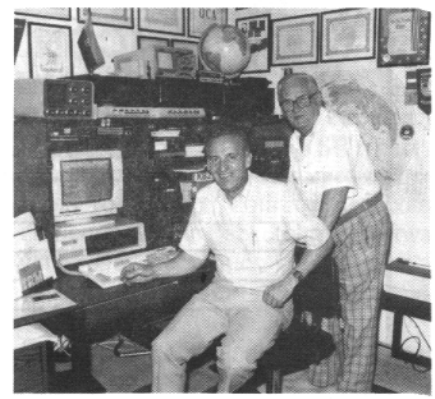
3. Much less of the available Baudot part of the band would be taken up by the RBBS, thereby allowing rag-chewers and DXers to have a chance to do their thing, with less chance of the contact being interrupted by an unnecessary beacon.

I have had more contacts QRMed by W1AW than by the SYSTEM 64 RBBSs. Probably because I am not a clock watcher, and I forget their scheduled times of transmission! While on the subject of W1AW, congratulations to the ARRL for changing the frequencies, for their code practice sessions, to be more within their own, "Considerate Operate Operators Frequency Guide".

Now if we could only dissuade the IARU in Region 1 from implementing their H.F. Packet Band plan of 14.089 to 14.100, if they have not already done so, the Baudot fraternity would be a bit happier!

After the above two comments, I will probably get a 'dishonorable' discharge from the ARRL and G-1 and may be "ex-communicated" from the IARU.

73 GL and DX de Eddie, W6/G0AZT ■



Ted, HC5K visits George, KB2VO in Florida after Dayton 1989

DON'T BE A BEACONITE!

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The Soviet Maritime Radioteletype Dictionary is a book that will enable you to find, decode and understand the extensive third-shift Baudot Russian maritime traffic. 102 pages. Only $11.95 (+$1 shipping). Universal Radio, 1280 Aida Drive, Reynoldsburg, OH 43068, 614-866-4267

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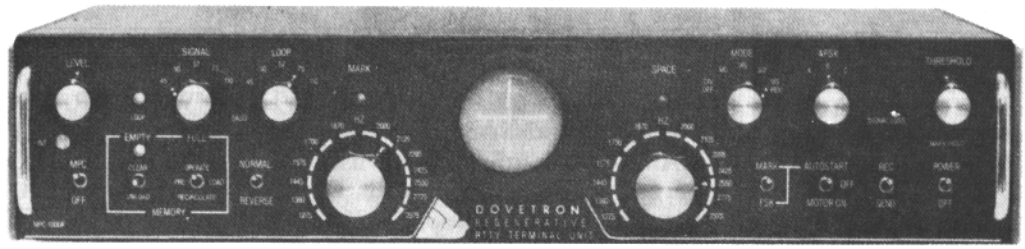

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