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RTTY DIGITAL JOURNAL™

A Dedicated Digital Publication Since 1953 Volume 40, Number 1, January 1992

40 YEARS OF SERVICE

FROM GREENKEYS TO COMPUTERS WHAT NEXT ?

Merrill Swan, W6AEE
Publisher 1953-1967

Dusty Dunn, W8CQ
Publisher 1967-1977

Don Crumpton, W6KCW
Publisher 1977-1978

Dee Crumpton, N6ELP
Publisher 1977-1986

Dale Sinner, W6IWO
Publisher 1986 -

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RTTY DIGITAL JOURNAL

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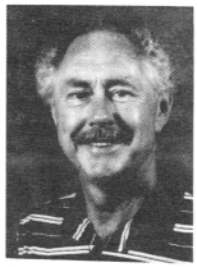

HITS & MISSES

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DAYTON ROOMS

The RTTY Journal still has some rooms available. If you need a room, contact Dale , W6IWO, either by phone or FAX immediately.

Going on Forty Years

The RTTY Journal begins it's 40th year of continued publication this year. That's a mighty long time for a Newsletter to survive, especially considering the small segment of our hobby it serves. But survive it has and it continues to grow as the Digital Modes become more popular every day. What once was dominated by noisy mechanical machines dripping oil on the floor has evolved into the silent generation of computer generated images filled with beautiful and interesting projections, that give us great enjoyment and enhance our means of communication. The RJ will continue to lead in covering our phase of the hobby but throughout this year I plan to re-publish excerpts from the past that exemplify our advancements.

Merrill Swan, W6AEE, started the RTTY Journal in 1953 and continued as Editor - owner until 1967 at which time he sold his interest to Dusty Dunn, W8CW. Dusty continued to publish the RJ until 1977 when the gavel of editorship was passed to Don Crumpton, W6KCW. Don passed away shortly thereafter and his wife Dee Crumpton, N6ELP, carried on until 1986. In 1986 I became the fourth publisher of the RJ, a position I hold today with many mixed emotions. To fill the shoes of so many great Hams who have given unselfishly to the continuance of the RJ has been a real challenge. So each month my efforts are directed to keeping this legacy alive for many more years.

Over the years in addition to all the publishers, there have been countless contributions by individuals who have submitted literally thousands of articles for publication. By sharing with all of us there wisdom and technical expertise, we have all benefitted and our phase of Ham radio has continued to advance. Also, this could not have been accomplished without our advertisers, who help with their financial support. The next time you need a digital product, check out our advertisers first.

New for 92

In this issue you will notice that Jay, WS7I, has decided to move over into the hardware department. Jay has been doing an outstanding job with the software column and in the process accumulated many pieces of hardware. As you all know, not all software available works with all the hardware out there on the market, so in order for Jay to review and evaluate the different software packages it was necessary for him to acquire specific hardware items. Now with this inventory of hardware, he will be able to help with those questions that come in on hardware problems. Jay is excited about this change and I know he will continue in this new assignment with the same enthusiasm as he has displayed in his many software columns. If you have hardware problems, send them to Jay and if you also have hardware solutions you wish to share with all of us, send them to Jay.

Jim Mortensen, N2HOS, is taking over the software department and his first article appears in this issue. He needs to know what you would like for him to tackle, so your letters on software are solicited. Whether they be questions or solutions, give Jim your input and help him to keep the software column top-notch. Jim is also going to bring us his views on other software that can make our lives a little easier around the shack.

RTTY INDEX

For those of you who are fairly new subscribers and would like to catch up on what has been going on in past issues, the RJ has an Index available for $2.00 ppd that covers all years from 1984 forward. Most all of the back issues are still available from us. I suggest you consider purchasing the index if you are interested in back issues. Of course, the Index is a nice tool for everyone to have around the shack. It is an easy way to look up an article that you wish to re-

view but forgot when it was published. The Index is loose leaf and three hole punched for note book filing.

Dayton Lineup

Are you going to Dayton? If not, you may wish to change your mind. Read On! A lot of people have been very busy planning a really big show for us digital types. Steve Waterman, K4CJX, who will be your host of the RTTY Journal sponsored dinner at Dayton has lined up David Larsen, KK4WW, to speak on his trips to Russia distributing computers. David and his Russian counterparts were the first to accomplish a AMTOR contact from the USSR.

Steve has our dinner menu planned following the same lines that has been used in the past couple of years with great success. Elsewhere in this issue you will find an announcement and particulars on the dinner.

Steve has also planned a special session on APlink for Friday afternoon at the Radission Hotel. This gathering will be in the Premier Room and begins at 4:30 P.M. APlink operators are encouraged to attend this meeting. Vic Poor, W5SMM, plans to present all the latest changes in APlink software and provide training where needed. At present, Steve informs me there will be many of the most active APlink operators attending Dayton this year. So not only is this a chance to meet these prominent individuals and enjoy an eyeball QSO but you will also be able to enjoy the presentation planned by Vic Poor author of APlink.

Digital Digest Forum

Again this year the program will be of great interest to all who attend. On the program will be our own Jay Townsend, WS7I, who will have a presentation on software. Jay hopes to review live for you many of the software programs out there. Maybe you have been wondering which program to buy for your system. By attending this session, hopefully, you will go away with an understanding of those programs you have been contemplating. Don't miss Jay's presentation. The forum starts at 12:00 noon on Saturday.

Also on the program will be Vic Poor, W5SMM, author of APlink. Vic will bring us all up to speed on the latest developments with APlink. I suggest you read Jim Jennings, KE5HE, column this month. After reading his column, you will have an insight into what Vic will be discussing at the forum. Seats fill quickly, so be there on time.

Last Voice From Kuwait

Last year the gulf war brought about great strides in the advancement of communications using AMTOR. Those of you who attended the RJ dinner last year already know some of this story as it was related by Frank Moore, WA1URA/7. Frank has taken these exploits and some of the many involved and committed the story to a video tape entitled "The Last Voice from Kuwait." The video depicts the story of one brave Kuwait Ham who kept the outside world aware of what was happening in Kuwait during the crisis. His bravery even extended to messages of upmost importance that reached the highest levels of our government.

The messages were passed via AMTOR and many Hams around the world were involved. Frank will be at Dayton and have his tape with him. It will be shown in the RTTY Journal hospitality suite on both Friday and Saturday nights. Frank is to be commended for his efforts in furthering our phase of Ham radio. This video was very professionally done and can be shown at club meetings but not for profit. For more details contact Frank Moore at his CB address.

Contesters Guide

For those of you who like to contest, the RJ has compiled a booklet with all the contest rules and forms used by the Digital contests world-wide. This forty page book sells for a modest $9.50 plus $3.50 S/H and can be purchased direct from the RJ. The booklet will be introduced in the Contesting column next month by Hal Belgen, WA7EGA. It has taken many months to complete and contributions to the guide were received from contest managers around the globe. The guide does not contain specific dates of contests because the dates always change but it does reflect the weekends involved. All the forms can be tailored to your station and situation.

With this guide in hand, you will no longer need to dig around through publications to find out when a particular contest is going to be held. However, as contests come up, the RJ will continue to publish all the rules as well as all the results. So whether you are new to contesting or an old timer, the Contesters Guide will be a valuable addition to your Ham shack.

Discount Coupon

The discount coupon now being inserted in your copy of the RJ is designed to give you an opportunity to obtain a discount on your next renewal and at the same time help me swell the ranks of the RJ. Here is how it works.

- 1. You find someone who is not presently a subscriber.
- 2. You fill out the top portion of the coupon and mail or give it to the potential subscriber.
- 3. If this potential subscriber sends the coupon to the RJ with remittance to become a subscriber, you become eligible for a discount on your next renewal.
- 4. When the RJ receives the new subscribers remittance, an acknowledgment of this transaction will be sent to you for use on your next renewal.
- 5. When you receive your next renewal notice, simply take the discount and mail your remittance with the acknowledgment coupon to the RJ and we will honor your discount request.
- 6. In the event, you lose your acknowledge, the RJ will still have a record of the transaction on file.

DXer of the Year

Every year the RTTY Journal selects a RTTY DXpedition of the year and the recipient receives a beautiful plaque for their efforts. The RTTY DXpedition selected must have been one in which a major thrust was made to give QSOs to RTTYers. This award is not for voice or CW work or for overall recognition of a DXpedition. If you would like to be a part of the selection process, simply send me your selection and the reasons why you think your selection should win. I will announce the winner at the RTTY dinner in Dayton come April of this year.

That's it for this month. Until next time, may this hobby continue to give you pleasure. 73

de Dale, W6IWO ■

DAYTON ROOMS

The RTTY Journal still has some rooms available. If you need a room, contact Dale , W6IWO, either by phone or FAX immediately.

THE LINK

Jim Jennings, KE5HE
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Hearne, TX 77859

Just by looking at the headings and sub-headings of Jim's column, it is easy to see, that there is a lot of great digital reading to store for the reader this month.

WHAT'S NEW FOR '92?

Last month I thought that I would have trouble scraping up enough material for the January '92 column. Now what I have is more than I can use. There have been many new things showing up on the horizon and I think that some discussion of the new APLINK related issues is appropriate.

Automatic Unattended Operation Survey

I ask that each of you take the time to carefully read the information presented on page 41 of January 1991 QST. Read it, let it sink in, and come back a couple of days later and read it again. Please fill out the survey and send it in to the ARRL. Your voice is important on this issue. I am personally opposed to fully automatic unattended operation.

This is not a PACKET/AMTOR issue. Rather, it is an issue that covers all digital modes present and future. I am just as opposed to fully automatic operation on AMTOR as on PACKET. You may not be aware of it, but the AMT-1 is capable of determining if an AMTOR signal is on frequency while in the standby mode. If so, the unit will inhibit transmission. While that is true, however, it will transmit if a PACKET signal, or any other signal, is present. Transmitting on a frequency while it is in use violates the cardinal rule of radio communications.

What it all boils down to, in my opinion, is that fully automatic unattended operation requires dedicated subbands. When you have computers and people trying to use the same crowded frequencies, the computer will win out every time. Along with dedicated subbands comes a permitting of who can operate on them. This limitation of the exciting and new developments to a very small percentage of the Amateur community defeats the whole purpose of learning, experimentation, and development that has marked Amateur Radio positively for the past 7-8 decades. Is it right to take a portion of the HF spectrum away from the 300,000 or more Amateurs in this country and permit only a limited number of Amateurs to use those subbands? I think not. In any case, please fill out and submit the survey form.

Full ASCII Character Set for AMTOR

G3PLX, Peter Martinez and inventor of AMTOR, has implemented and had in use an UPPER/lower case option on the PLX MBOs for the past several months. During December, Vic Poor, W5SMM, has experimented with the protocol on APLINK. Several of the APLINK stations, those running version 5.Gx and later, will probably be using the protocol. The development so far has only included UPPER/lower case alphabetic characters. However Vic has informed me that he has tested a protocol which would enable the sending/receiving of any character that you see on your computer keyboard. All of this comes with only about a 4% overhead, so it doesn't slow the system down noticeably. In addition, the protocol is fully backward compatible with existing hardware. (Well, hopefully anyway.) The protocol for the UPPER/lower case is as follows:

On Transmit, start each transmission in upper-case. If the character about to be transmitted is in a different case from the current case, then prefix it with a NUL code and change the case. If the character about to be transmitted is not a letter nor CR nor LF nor space, then reset to upper-case. On Receive, start each transmission in upper case. On reception of a NUL code, change to the other case. On reception of a character that is not a letter nor CR nor LF nor space, then reset to upper-case. So the protocol requires the transmission and reception of the NUL code, one that is not currently used in the BAUDOT code. The protocol for the full ASCII set follows along the same lines.

We have seen several things as a result of introducing this extension. One is that several of you with the PK-232 have had strange control characters (usually the @ sign) get printed. This can be prevented by setting the MFILTER parameter in the PK-232 to $80. That filters out all control codes. In order for you to receive and transmit the ASCII character set, you will need the software. Currently, only test versions of APLINK have the protocol partly implemented. Vic tells me that he will also upgrade PAMs to handle these features also.

Error Rate

It is important that the error rate of the controller be very low when handling this new protocol. Otherwise you miss a NUL character from time to time and as a result get the wrong case. The effect is similar to what happened to us in the past on BAUDOT RTTY. Your machine would get off into FIGs and would send/receive a bunch of numbers rather than letters. I must say that the error rate of the AMT-1, PK-232, and PCI-3000 controllers is very low. Vic tells me that he has yet to see an error with the AMT-1 in his tests with Craig, WA8DRZ. Each of these controllers relies on much more than the 3/4 bit ratio for AMTOR to determine if a character is valid.

New APlink Software Coming

Vic has had ideas of a completely new APLINK software system for some time now. He has let me preview the screens on his next major version, which will be APLINK for WINDOWS. This software will be very powerful. He tells me that he plans to have AMTOR, PACKET, and CLOVER II capability in the new version. Running under the WINDOWS multitasking environment will allow many nice features. One example is that one could run

the TY1PS (Peter) scanning program for WINDOWS. Now is the time for you computer jockeys to purchase a copy of Visual Basic and start building a library for use in the WINDOWS environment. Of course the downside of all this is that one really needs a 386 class computer to make it work right.

Clover II

I recently received a nice letter from Bill Henry, K9GWT, of HAL Communications. He says that beta testing of the new CLOVER hardware/software will begin in "Spring 1992." He plans an informative update on CLOVER at the Dayton Hamvention. Vic plans to start testing of the CLOVER hardware in late March. So it looks like by the end of 1992 we should have something running that you can see. With a throughput of up to 10 times that of AMTOR, CLOVER will be a welcome addition to the digital modes.

Dayton Hamvention

Now is the time, if you haven't already done so, to firm up your plans to attend the Dayton Hamvention, the last weekend of April. Many of the APLINK SYSOPs will be there. Vic will show us what he has coming on APLINK software. Plan to be in on the latest discussions about Digital communications, APLINK, CLOVER II, and visit with your keyboard buddies.

Some APLINK Station Setups

Recently, I asked if the SYSOPs would send me a brief description of their APLINK and related digital station setups. Here is some of the information I received. Boy, what a variation in station setups! Some are very elaborate and some rather spartan. But they all seem to do the required job.

WA8DRZ, Craig in Redwood City, CA

I don't have a complete station lineup at WA8DRZ, but what I do have should be of a lot of interest to the technically oriented bunch. From Craig: "Diversity Reception at WA8DRZ - Antennas - The main (transmit) antenna is a Butternut vertical on the roof of the carport. This feeds the receiver in the TR7, but can be switched to the R7. The other (rcv only) antenna is a trap dipole strung over the main roof of the house. It is at about the same height as the center of the vertical and about 30 feet to the North. The dipole normally feeds the R7 receiver. Audio from both the TR7 and the R7 feed separate FSK demodulators, they are Electrocom Model 400 Frequency Shift Converters. They feature input audio bandpass filters, separate Mark and Space channel filters and detectors. I have modified them (with the help of the designer, W9BJ) to combine the plus/minus detected voltages (all four) at the output of the detectors. That combination then feeds the slicer where a Mark/Space decision is made. After low-pass filtering, the signal is converted to RS-232 levels and sent to the AMT-1 which I have modified by disconnecting the internal demodulator."

OD5NG, Tom in Lebanon

Tom has an interesting station, in that he does not run APLINK, but rather an APLINK/G3PLX autoforward compatible system that he wrote in PASCAL himself. This runs on an Apple IIc. His program is called "ReadyLink." This program was developed just before the Gulf war. The autoforward capability has only been recently finished. During the war, he was the main link between Abdul, 9K2DZ, and the rest of the world. He says that most of the traffic was passed on FEC using special commands that he put in his program. ReadyLink is a WINDOWS-like program that has resizeable communications and editing windows with pull down menus. The communications window is active in the background while editing, but the BBS can't run in the background.

9K2EC, Moshin in Kuwait

I remember linking with the 9K2EC APLINK station when I first got interested in APLINK. Moshin sent me a note recently, but did not comment on his station. Before the war, he was running an IC-781, MacIntosh computer, and HAL PCI-3000. I'm not sure what he is running now. He scans 14072, 14079, 18102, 18105.5, 21081, 24.925, and 28079 and uses SELCAL KKEC. I enjoyed visiting with Moshin as I had spent several months in Kuwait in 1960 and enjoyed talking about some of those experiences.

9X5LJ, Jacques in Kigali, Rwanda, Africa

Jacques and I regularly check into each others systems and pass traffic. He is running APLINK, although he does not support the PACKET side since there is no national packet network in the country. Jacques runs a Kenwood 940SAT, PK-232, XT clone computer with 20 Meg HD, and uses a KLM 10-30 MHz log periodic antenna.

TY1PS, Peter in Cotonou, Benin, Africa

Peter and I have exchanged notes on scanning and running APLINK under WINDOWS. He has written an interesting scanning program which runs as a WINDOWS application concurrently with APLINK in that environment. I understand that he is writing an article for the RTTY Journal on the scanning portion, so I will not discuss that here. Not only does he scan specific frequencies, but also spends a portion of each scan cycle in free scan where he scans 3 KHz in each of the 14, 21, and 28 MHz bands starting at 70 KHz. I plan to devote some time to scanning in a later issue, as I think the way Peter is doing it by controlling the radio directly through the digital port is the way to go. Peter says that APLINK runs fine under WINDOWS if you use MSDOS 5.0, WINDOWS 3.0, and APLINK 5.05 or later. He suggests loading the APLINK comport driver, MBBIOS, from inside WINDOWS. I don't have any other information on his station, other than he is running a YAESU 757GXII and a 386SX clone with 2 Meg Ram for the computer.

73 AND GOD BLESS

de JIM, KE5HE AT KE5HE.TX.USA.NA

RTTY

CONTESTER'S GUIDE

This guide contains all rules, forms and pertinent information to help you enjoy contesting using the digital modes.

More information on page 22

MSOs

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Rapid City, SD 57702

DAYTON ROOMS

The RTTY Journal still has some rooms available. If you need a room, contact Dale , W6IWO, either by phone or FAX immediately.

JANUARY 1992 MSO COLUMN

Happy New Year to all of you! I hope that Santa was benevolent in his gifts to all of you, and that everyone is busy twisting new dials, pushing new buttons and enjoying life in general. The XYL and I were certainly fortunate at Christmas this year, in that we travelled to sunny Florida to spend the Holidays with our youngest daughter and her family in Gainesville, and a week with my mother near Fort Myers. It's a bit difficult to return to the rigors of South Dakota weather, especially after spending several days at the beach, but I haven't found a way to spend all of our time down there yet!

I want to start out this months "MSO Column" by thanking all of you who took time to write and express your opinions about "The Hornet's Nest". I value each and every one of your responses, and hopefully will be able to provide some service via that column in the future. Keep those cards and letters coming!

DAYTON HAMVENTION, 24, 25 & 26 APRIL, 1992

It's certainly not too early to beat the drums a bit about the upcoming Dayton HAMVENTION, as time sure flies, and it won't be long and the annual migration to Ohio will start. Hopefully those of you who are planning to make the trip have firm hotel/motel reservations by this time, as housing in the Dayton area during the convention is "slim to none", unless you have a confirmed reservation. In fact, motel/hotel accommodations within a 60 mile radius of Dayton during the HAMVENTION are very limited.

In keeping with the spirit of digital modes, the 14th Annual "RTTY Dinner" will again be held during the Dayton HAMVENTION, and I hope that as many of you as possible can attend. We always have a good time at the dinner, and I'm sure that this year will be no exception. This years RTTY Dinner will be hosted by Steve Waterman, K4CJX, and I'm sure that he will have a very interesting program. At press time I do not have details on the entire program, but I am told that David Larsen, KK4WW, of Blacksburg, VA, will speak about FAIRS, (Foundation for Amateur International Radio Service.) I'm sure that Steve will have the rest of the details about registering to attend the Dinner in a forthcoming issue of the RTTY Journal. For advance planning only, the RTTY Dinner is normally held at approximately 7:00 PM at the Radisson Inn Dayton, (I-75 and Needmore Road in Dayton), on Saturday evening. Stay tuned for additional details. (See page 15)

For those of you who want to have an "eyeball QSO" with some of your digital friends and acquaintances, be sure to drop in at the RTTY Hospitality Room on Friday or Saturday evening. In the past it has been sponsored by The RTTY Journal, HAL Communications and Ten Tec, and it is located in the southeast corner of the main floor of The Radisson Inn Dayton. Digital enthusiasts from all over the world show up there from time to time, and you'll be sure of enjoying some spirited conversations. Unofficially, I hear that AMTOR/APLINK and PAMS will be high on the order for discussion, so here's your chance to get it "from the horse's mouth!" Without a doubt the HAL "PC-CLOVER" system will also get some well deserved attention.

SAD NEWS DEPARTMENT

There are few of us "old timers" around who remember the original "RTTY Dinner", (held at the Mill Inn in Miamisburg, Ohio, in April of 1978.) And there are fewer yet who can say that they have been to all of the RTTY Dinners since that time. However, with the exception of last year, Don and Ruth Gallagher, (K8WZX), had been to all of them. Ruth's health had deteriorated over the years, and I'm very sad to report that she passed away in November 1991 after a long illness. Our hearts go out to Don and his family, and words alone cannot suffice during this sad time. Don's comment that "God picks special flowers for his bouquet" is certainly an appropriate one. We'll miss seeing Ruth's smiling face at Dayton each year, and the RTTY Dinner will not be the same without her.

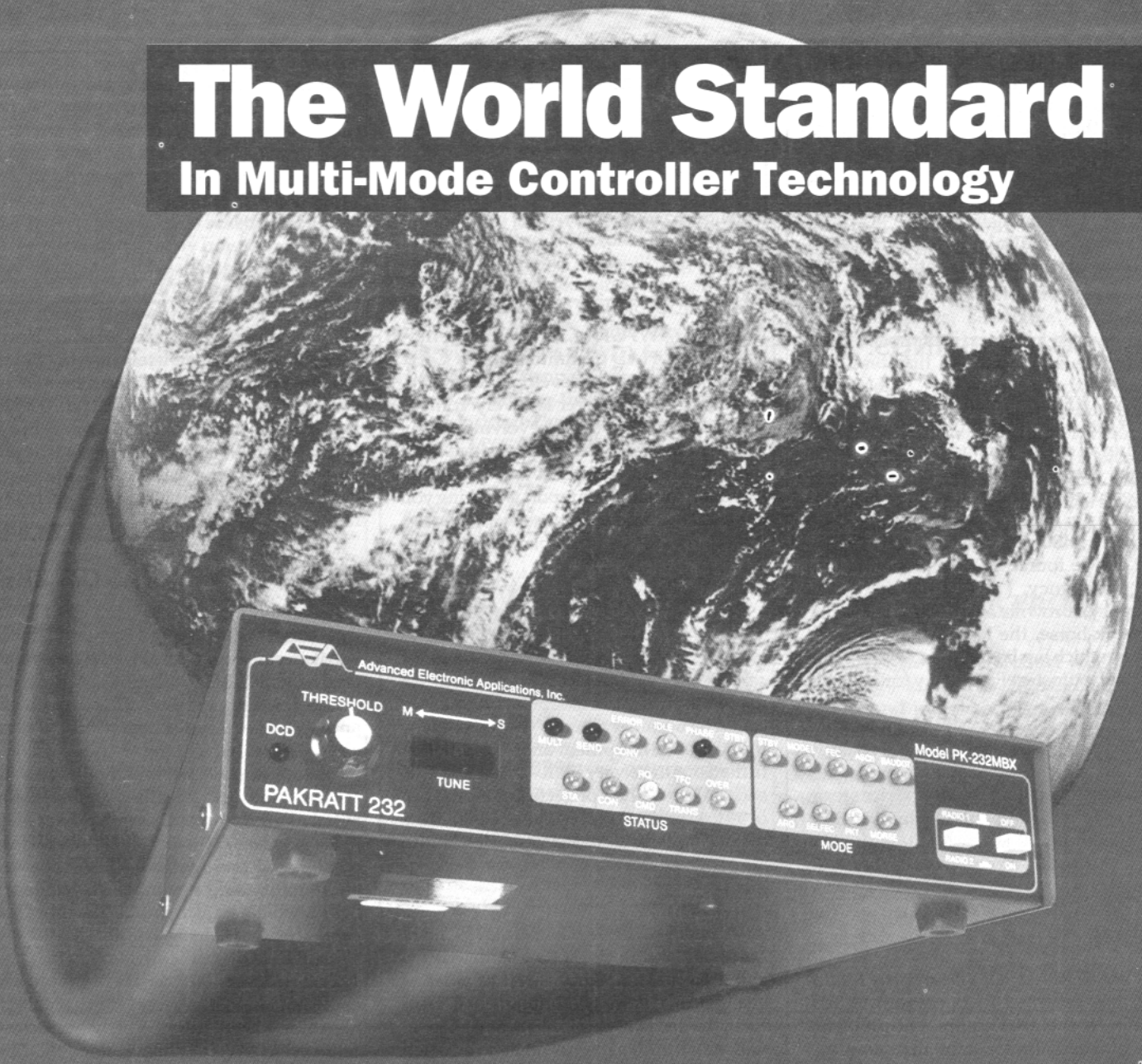
HAL COMMUNICATIONS "PC-CLOVER" SYSTEM DEVELOPMENT

Standby America..... We have news! The design, prototyping and development of the new HAL Communications "PC-CLOVER" system is progressing well. A little behind schedule because of some hardware and software design modifications, the system should be ready for Beta Testing within the next 60 days or so. HAL's goal of "ten times the speed of AMTOR" has been met and exceeded in their preliminary testing, and the end product will be available shortly after Beta Testing is complete.

Instead of the "stand alone" unit originally envisioned, "PC-CLOVER" will instead be furnished as a standard "long slot" PC card, which simply plugs into your PC computer. A "PC-AT" computer, (30286 CPU) will be required, and if the end user desires to utilize a "Windows" environment, then a 30386 (or higher) CPU is recommended. This system is known as the PCI-4000, and will have as its operating software a program much like "PC- AMTOR" that is utilized in the PCI-3000. The operating program will be entirely software based, (versus EPROM firmware), which means that software updates are as simple as loading a new program.

The World Standard

In Multi-Mode Controller Technology



The PK-232MBX is the undisputed leader in multi-mode controllers. Here are a few reasons why:

Filtering. With a high-quality front-end filter (seventeen-pole effective filtering), the PK-232MBX gives you the best HF performance of any multi-mode controller.

Software. Our Host Mode control programs offer unmatched power and versatility in an easy to use, intuitive format. Available for PC-compatible, Macintosh and Commodore computers.

Packet Lite™. On HF, two PK-232MBXs communicating with AEA's exclusive Packet Lite can achieve a 40% increase in throughput over standard packet.

Modes. The PK-232MBX can transmit and receive AMTOR, Morse, Baudot, ASCII, Packet, and WEFAX. In addition, it can receive NAVTEX (NAVigational TelEX) and TDM (Time Division Multiplex) for a total of eight different types of signals.

AMTOR and Packet Mailboxes. The only controller with a mailbox for both packet and AMTOR is of course the PK-232MBX.

See for yourself why more hams choose the PK-232MBX than any other controller.
In two words,
UNBEATABLE PERFORMANCE.

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BBS, MSO or other "mailbox" software is not a part of the PCI-4000 system. However, due to the simplicity of the interface between the PC- CLOVER card and the PC bus structure, you can be sure that some enterprising programmer will be burning the midnight oil to provide these features. HAL will be demonstrating the PC-CLOVER system at the Dayton HAMVENTION and have additional information available in the next 60 days or so. Stay tuned!

MSO RAMBLINGS:

Brownie, K5FL, of Denton, Texas, has a new 30386 computer on line now, and is learning all of the "ins and outs" of his new system. Brownie tells me that it's "faster than greased lightning", and he's learning something new about it every day. Brownie's MSO (Message Storage Operation) can be found on the National Autostart Frequency, (14 085 625 Hz Mark frequency). Brownie also utilizes a familiar old work-horse, the HAL MPT3100 MSO system, which has been the backbone of the National Autostart Frequency for almost a decade now.

SYSOP Larry Workman, KA0JRQ, recently installed a new vertical antenna at his southwest Iowa location, after an ice storm made spaghetti out of his original vertical. Along with his 20 Meter MSO on the National Autostart Frequency, Larry also maintains a very active APLINK system, with which he scans several frequencies and bands.

The WA8ZRK MSO, (Dearborn, Michigan), has returned to operation. SYSOP Dennis reports that equipment problems have plagued him for some time now, but hopes that they have now been corrected and he can continue to provide MSO service.

Clark Constant, W9CD, has released an updated version of his very popular "MSO Program." It's free for the asking, and emulates the popular HAL MPT- 3100 MSO system. Only a PC computer and the HAL PCI-3000 system is required in the hardware department. If you're interested in running a MSO, Clark's program is hard to beat. Please send a formatted 5 1/4 inch floppy, mailer, and sufficient return postage to Clark Constant, W9CD, 2208 S. Race Street, Urbana, IL, 61801.

That's it for this month Gang. Can Spring be far off? Hope to see many of you at the Dayton HAMVENTION. —73—

de Dick, K0VKH ■

CLOVER STATUS REPORT

byline: **Bill Henry, K9GWT**
Ray Petit, W7GHM

Ray Petit, W7GHM, and Bill Henry, K9GWT, of HAL Communications Corp. continue to work on development of Clover modulation. Clover is a very complicated project that is still evolving; many features have been changed or added since the first demonstration last year at the Dayton Hamvention. This report will bring you up to date and present more realistic information regarding future plans for Clover.

SUMMER CLOVER

HAL has designed and built a stand-alone cabinet Clover unit that was planned for use as a software development vehicle - we called it "Summer Clover." Unfortunately, the cost of development and reproduction turned out to be very high - about $3000.00 each. What we had projected as a pilot run of 30 to 40 units that could be used for "beta testing" was soon reduced to eight units, all of which are now in use for development.

As a result of testing of Summer Clover hardware and initial software, it was decided to make a fairly large number of changes in how we will implement Clover. First, the hardware cost for Summer Clover was much to high for a realistic amateur product. If Clover is to be accepted and used by many Amateurs, the cost must be lower. Also, our choice of hardware used in Summer Clover has turned out to be very restrictive on Ray's software. The 6809 "host processor" used in Summer Clover just does not have enough "horse power" to do all that Clover promises.

CLOVER PATENT

In July, Ray Petit, W7GHM, and HAL Communications filed for a Clover patent with the words "Clover", "Clover-I", and "Clover-II" as registered trade marks. Ray is the inventor and the patent is assigned to HAL Communications Corp. The intent of filing the patent is not to exclude other manufacturers from producing Clover equipment. We want to license use of Clover technology as freely as possible. However, Clover is a completely new invention with far reaching possibilities for amateur, commercial, and military use. We are still working out the details of licensing, but it is our intention that amateur use will not be expensive. Since we are still "adjusting" the features of Clover, we are not yet ready to discuss licensing details.

NEW CLOVER HARDWARE

As a result of testing of Summer Clover hardware and software, we have discovered a number of new features we can have that will greatly enhance Clover performance. We have also discovered a number of situations in which the Summer Clover hardware imposes serious limitations on the software. As mentioned above, the stand-alone Summer Clover hardware has proven to be very expensive. As a further result of all these factors, Clover is presently undergoing a number of changes in how it will be implemented. The more important of these changes are:

1. The hardware base will be a PC plug-in card, not a stand - alone unit. This will allow us to have a $995.00 introductory retail price. We call this version "PC-Clover", the model number is PCI-4000.

2. The "host processor" will be a 68000 device rather than the 6809 used in Summer Clover. This greatly increases the "horse power" available for the software.

3. Clover software required to run the 68000 and DSP56001 on - card processors will be downloaded from the PC rather than placed in an IC ROM on the board. This will avoid the big hassle of ROM-based software up-grades we all know happen.

4. The interface between the PC-Clover card and the PC bus will be compatible with "windowed" software. This is the "new architecture" being adopted by most system programmers and should assure a long life-time for PC-Clover hardware.

The new PC-Clover hardware is nearing completion of the prototype design. We plan to have a few working prototypes sometime in February, 1992. All of these changes were not made lightly. Changing the host processor is requiring a major rewrite of most of the software. The changes have indeed slowed our schedule. However, we feel that a delay now is far better than trying to "limp along" with slow hardware in our first Clover product and then having to announce a "new and improved version" shortly thereafter. Another important hardware feature is that the PC card itself is full size and must be used with a "PC-AT" or higher class of PC. If you plan to run windowed software, a "PC-386SX" or "PC- 386" is highly recommended.

PRELIMINARY TESTING

Ray, W7GHM, Bill, K9GWT, and Ed Bixby, AK0X, have conducted some on the air tests of Clover as implemented in the Summer Clover units. We have also done extensive laboratory testing of Clover under simulated conditions. To date, all tests confirm that Clover modulation will support much higher data through-put on HF than is presently possible using AMTOR or HF Packet. Our goal of "ten times the speed of AMTOR" has been met (and exceeded) many times. The Clover-II protocol we demonstrated at Dayton last year (and many other places) was a "broadcast protocol" - much like AMTOR FEC mode. Since that time, Ray has added an ARQ mode that operates much like AMTOR and Packet radio. We have devised a very good adaptive algorithm that measures existing ionosphere conditions and adjusts Clover modes to maintain the highest possible through-put that the ionosphere will support, even in the face of fading signals and multi-path distortion. Measured frequency spectra of Clover-II, AMTOR, and HF Packet are shown in figure 1.

We know that AMTOR operators in particular have been concerned that Clover connect times be short enough that they can continue to use frequency scanning techniques. We agree that frequency scanning greatly expands the usefulness of HF radio and are in the process of making the connect phase of Clover as short as possible. Summer Clover requires a minimum pulse length of 2 seconds for frequency/phase synchronization; a connect takes 15-20 seconds. The new hardware base (68000) and software revisions will reduce connection time to a few seconds.

AMATEUR USE OF CLOVER

With the advice and guidance of the ARRL, we have determined that the CCIR Emission designator for Clover is either "500HJ2BEN" (RTTY) or "500HJ2DEN" (DATA.) This emission is fully compliant with our existing FCC rules and regulations (Part 97.) To aid in identifying Clover as an Amateur emission and to prevent any mistaken assumption that Clover might be an "intruder signal", initial Clover software will include a CW ID feature. We view this as a "temporary inconvenience" and not something that is either required or long-lasting. The character stream entered as "MYCALL" will be sent as the CW ID.

APPLICATION SOFTWARE

Each HAL PC-Clover product will include a single-user PC- based program that may be used to connect with and talk to another Clover station. It will be much like our PC-AMTOR program furnished with the PCI-3000. This program will not be a "BBS" or other network program. We are now discussing the writing of customized drivers for existing "BBS-type" programs with several programmers. We would certainly like to hear from additional network programmers. The economics of commercial software development are such that it would be prohibitively expensive for us to undertake the development of such software. Further, very good software now exists with features you like and know how to use.

The PC-Clover card has been designed specifically to make interfacing via the PC-bus very simple to the knowledgeable programmer. To aid when working in a "window environment," data and commands passed via the PC-bus are buffered by on-card FIFO memories. The PC card may be operated in either an I/O memory-mapped, poll-select mode, or as a PC I/O interrupt-driven accessory. As in the PCI-3000, the I/O address and interrupt (when used) are jumper selectable options. A complete command protocol is being prepared and will be made available to all interested PC software authors. Please write for more details if you are interested in writing applications software for Clover. HAL will be glad to promote all such software packages made available for Clover, but we ask that each author handle all sale, distribution, and user support for his software.

FIRST CLOVER PRODUCT

The first HAL Clover product will be the "PCI-4000", known as "PC-Clover." The product and initial software will be first demonstrated at the Dayton Hamvention on April 24, 25, and 26, 1992. The introductory retail price will be $995.00, available directly from HAL (and selected HAL dealers.) We should be able to ship production units on or before July 1st, 1992. Finally, HAL should have revised data sheets available by mid-February, 1992.

de Bill, K9GWT & Ray, W7GHM ■

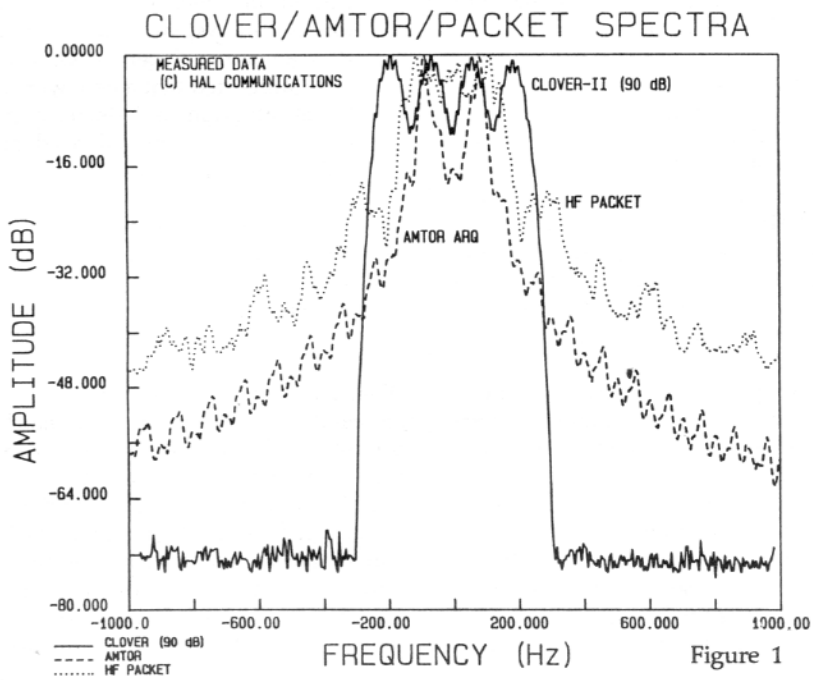

Figure 1

I.A.R.U. Monitoring System

Submitted by: Mark Allen, WJ7X

Mark gives some insight into the world of monitoring frequencies for intruders who venture into the Amateur bands. This important function needs some helpers. Do you qualify?

Many of you are familiar with the long established and respected "Intruder Watch" program administrated by the IARU (International Amateur Radio Union.) The name of the program was changed a while back to one more suitable to reflect a changing mission. It is now called the "IARU Monitoring System." (IARU M/S) Is it true we have no more "intruders" into the exclusive amateur bands? Not hardly. What we have are private and government stations who violate existing international agreements and operate where they wish.

To detect, identify, record, and report these stations is the job of the M/S, primarily dealing with non-amateur stations who operate within the exclusive amateur band allocations. Who operates these monitoring systems? The ITU (International Telecommunication Union) has divided the world into three regions. North and South Americas are contained in region 2. There are many amateur radio societies within region 2 who are members of the IARU. Some of these you may recognize are ARRL, CRRL, and others.

These individual societies in some cases operate there own monitoring systems. The results of these individual efforts are then compiled by the IARU Region 2 Monitoring Coordinator for use on a worldwide basis by the International Coordinator. The International Coordinator, ZL1BAD, Bob Knowles, in turn coordinates efforts on a worldwide basis to remove the offending station from the amateur bands.

What exactly are "exclusive" amateur bands? As you know amateurs may operate on many frequency bands. These vary somewhat from country to country, but in all cases are regulated by international agreements administrated by the International Telecommunications Union (ITU.) These agreements set aside certain portions of the spectrum (bands) for the exclusive use of amateurs. Other amateur bands are shared with non-amateur services.

Since the exact bands are determined on a country by country basis, we shall not detail them here. In general, however, the 21 and 28 MHz bands are exclusively amateur on a worldwide basis.

There are many non-amateur signal schemes in use today. Some of the more common ones are:

- Multitone systems consisting of as many as 32 tones that are keyed both slowly and rapidly.
- Facsimile (F1C) - Non amateur transmissions usually are lengthy where amateur transmissions are not. A decoder will be required to "print" these transmissions when they are not encrypted.
- "Woodpecker", or OTH (Over The Horizon Radar.) This problem signal has been disappearing recently. The US and USSR were the primary operators of this system. It is classified as PXX emission. Recent news articles have suggested that a new world political situation and decreasing defense budgets have silenced many OTH installations.

There are many more non-amateur types of transmission. One cannot be knowledgeable of all of them. Old signals disappear and new ones are suddenly here to be heard.

What happens to the information that is gathered? Once the information has been compiled and confirmed, a list of non-amateur offending stations or signals are assembled and forwarded to the proper authorities for official action. The M/S system itself has no contact with the offending stations, except through the International Coordinator, it is an information gathering group only. Enforcement actions are the responsibility of the governments involved.

What kind of equipment is necessary to participate in such a program? A modest set up is all that is required. A good quality receiver with a digital readout, an omni-directional antenna for the bands of interest, and a desire to listen. Optionally, a tape recorder and decoding equipment for RTTY, AMTOR, etc. would be useful.

How much time is involved? This depends entirely on the individual. An hour or so a day is ideal, but seldom achieved. Most of us who are not retired, have a job to provide for their family, are lucky to get in two or three hours a week. Even this limited effort is 100% better than nothing at all.

Without an effective information gathering network, accurate information on intruders will be more difficult for the official agencies to obtain. Accurate and timely reporting is valuable to the effort to remove these intruders. Official agencies cannot take corrective action against these intruders if they do not know they are there.

How do I get involved or request more information? First, the listening game is not for everyone. Results are slow and frustrating. If you really are interested, there are several ways to get information. If you are an amateur, and wish to participate with the ARRL in the United States, contact them directly. If you are a non-amateur, or are outside the USA, you may contact this office directly and we will put you in touch with the proper society for your area. If no monitoring system exists in your area, maybe we should have one.

The Region 2 Coordinator is presently recruiting individuals and societies or clubs to participate. If you have an interest in this area of radio, we urge you to contact the Coordinator. There is an information package available describing requirements and necessary equipment.

The I.A.R.U. Region 2 Monitoring System Coordinator is:

Mark Allen, WJ7X
IARU Region 2
P.O. Box 451
Chanhassen, MN. 55317-0451
(24 Hr. FAX) 612-442-9730

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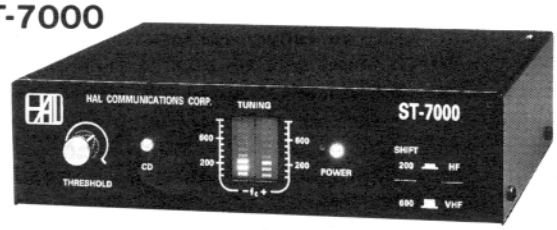
HAL Communications' ST-7000

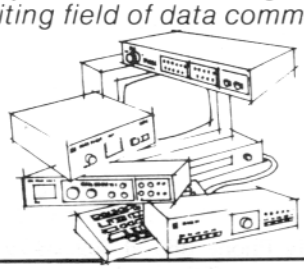
HF-Packet Modem. . .a high performance modem designed specifically for 300 baud HF-Packet. It offers no-compromise performance to assure optimum operation under the most demanding signal conditions. Techniques developed for government and military use are used in the ST-7000. AGC-controlled AM signal 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-1P compatability.
For serious 20 M world-wide DXing on Packet, 200 or 600 Hz shift. . .add the superb HAL ST-7000.

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If you have any questions concerning these units, or would like to discuss your requirements with a knowledgeable specialist, please call or ask for Fred Daukantas, N6SFD. 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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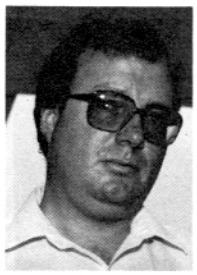


DAYTON ROOMS

The RTTY Journal still has some rooms available. If you need a room, contact Dale , W6IWO, either by phone or FAX immediately.

HARDWARE

Jay Townsend, WS7I
P.O. BOX 644
Spokane, WA 99210

Jay finishes his review of the Hostmaster software for the KAM this month as he prepares to move over into the hardware department. He asks for your input as he makes this transition, don't let him down, fill his mail box with goodies.

Leap year is upon us. 1992 will bring many more changes into the world in which we all live. I hope all of you filled in the ARRL's questionnaire and forwarded it to Newington. We need a band plan and some answers. The only thing that I hope is that today's rage which is clearly AMTOR doesn't become the Packet of this cycle. It seems that digital communications are cyclical and all of us jump on bandwagons.

The mailbag had some good things in it since I last wrote. Dean, WA6PJR, sent me a couple of letters and I sent him some software. PRJ is the guru of the IRDXA for hardware and software distribution. If you have some extra gear drop him a note (SASE) and see if he will take your donation and distribute it around the globe. Bob, KE2FE, writes with some comments about the KAM and the HostMaster II. He didn't like the way it worked at all and was going back to LanLink 1.59.

The BMKMULTY folks looked like the ticket for Glenn, AE0Q, and he was ordering up a copy for his Dovetron. I just have to mention a conversation overheard about the Ham that hated making cables for the Kantronics KAM. He didn't figure he could ever solder the 25 pin RS232 connector. I sent him a note suggesting buying one at Radio Shack. Sheez, making a few cables while a pain is part of the fun of putting something on the air. Received a real nice letter from Bill, AA4M/6 and a new version 5.1 of his QSL program. Hear via the grapevine that upper and lower case APLINK is out. In fact I got a test version. Real nice. Look for a EPROM (erasable program read only memory) update from HAL Communications for the PCI-3000.

AEA has a new newsletter with product announcements and of note is that there is a new PK-88 firmware available. Call 206.774.1722 the upgrade hotline for details.

Kantronics KAM and HOSTMASTER II

This is the final segment in the review of the KAM and the Kantronics HostMaster II. I have recently received a lot of mail about this combination and most was negative. To those who wrote in thanks for the comments. It is clear that there exists some problems that many encounter with this combination. I am not sure if it's a PC problem or not, but evidently it must be. The folks at Kantronics should be able to help. If you are doing FSK try the command FSKINV in the setup file and that should fix the upside down tones.

I have tried the KAM in several combinations, and have never had even a flicker of a failure. I might suggest that your autoexec.bat and config.sys files might need attention.

The KAM is a great digital device and even recently won a further inroad into my shack. I used it quite a lot on CW during the CQWW CQ contest and it copies on the ICOM 751A better than most of the devices. It is also real handy to have packet on the outgoing channel. I have had several requests for PIX software on the Kam and if any exists please drop me a note.

The WF1B contest program works quite well on the KAM and is a good choice for contesting. All the functionality seems to be quite similar to the AEA PK232.

PKTGOLD

Jim, N2HOS, is up and running on software so please send any further comments about programs his way. I have one more piece of software that I will complete in the very near future since the authors were so nice to send it to me. Its PKTGOLD which seems to be the answer to Windows 3.0 and digital communications. This will be a separate article from the connections theme. PKTGOLD is by InterFlex Systems, POB 6418, Laguna Niguel, CA 99607 714.496.6639 - Price class $65.

OFF TO DAYTON

Betsy and I will be in Dayton and hope to meet a lot of you folks there and we both are looking forward to the trip. Looks like Dale has lined up some work for me with the forum.

NEW FIELD

I am now going to be working on some hardware and combinations of hardware and software in the connections part of this hobby. Questions and mail will be the chief source of my material and I look forward to doing some research and getting things hooked up for those of you new to the hobby. Friends had better all duck because I will be on the telephone to you to find out how you have been doing things.

MFJ's national service manager, Robert Fox has recently written and I have now access to another major manufacturer of Ham Digital Communications gear. MFJ is going to be sending me some of their hardware and I hope to get a lot more familiar with it in the coming months. It is sure good that MFJ has started putting more emphasis on the customer. Technical support is 800.647.8324. I hope to have a lot more stuff on interfacing MFJ's hardware and products soon.

ScotchLg

My Phone BBS at 509.534.7924 has been ringing off the hook with requests for Hal, WA7EGA's ScotchLg. A special area has been setup and downloads are occurring fast and furious. A couple of Hal's comments have expressed interest in hooking up the ST-6 and similar units to the PK-232 as an external modem. I will take a look at this next month in some detail.

In order to assist you in hooking things up I need some input from you as to what you are having problems with. The MailBag needs to get full of questions and I will then search out the answers with the technical folks at the manufacturer or whatever it takes.

One of my major projects will be in exploring some simple increases to 9600 baud on the local packetcluster backbone using the MFJ modules to see how to do it. In the last few weeks I have mastered TheNet software and making digis'. We can get some technical advice also from Jim, WB7AVD, the local guru of hardware on the VHF side. I expect to be on the phone a lot to all the manufacturers getting some answers to your questions.

Closing out for this month, is a suggestion. Don't take the wires out of your rotor control and lose the paper that you carefully wrote all the pin outs on. This happened to me just the other day. As I write this the ARRL RTTY Roundup is in its final hours and I am sorry to say that with the rotor fixed on Japan it's not much fun trying to contest, so I took a break. The technical hint for this month is put more air on your amplifier to avoid overheating. I just saw a smoked and ruined hulk from TenTec with 2 charcoal tubes at $300 each.

73, **de Jay, WS7I** ■

Note Packet Address Change until the upstream BBS operators and the PacketCluster guru, AK1A, learn to make headers that the automatic WP readers can establish proper forwarding. Automation is not necessarily all that good of a thing.

WS7I @ WB7NNF.#SPOKN.WA.USA.NA

AWARDS

Betsy Townsend, WV7Y
P.O. BOX 644
Spokane, WA 99210

Happy 1992 to all from snowy Spokane. I started the year off with a letter from Al Shmytov, UA6XJJ, who writes to offer his services as a QSL manager for Russian hams to QSL designated DXpeditions, or for any U.S. ham interested in having him be his/her QSL manager. You can reach Al at: P.O. Box 36, Tyrniauz 361600, Russia.

My good friend Ted Jaramillo, HC5K, called from his travels in the U.S. to say "hello" and to let us know that his ICOM 751 is back from repair. This means that Ted's APLINK will be up and running, possibly by the time you read this. We should also see Ted back in contest form.

It's approaching time for the DXpedition of the year, which is announced by Dale Sinner, W6IWO, each year at Dayton. Your last minute votes or ideas should go to him. Remember that I've influenced him well, so whoever you believe should get the nod will need a long missive from you to influence him. Besides, maybe he will have enough letters from the readers to run a special column of laudatory letters for deserving DX stations.

Carl Steavenson, K6WZ, has been of enormous help lately helping me proof the all-time awards listings. Needless to say, he has spotted some errors that will be amended the next time they are printed. Also, I heard from Jean Alliaume, F5JA and Chuck Prindle, W6JOX. An interesting point was brought up: what to do when two hams were awarded the same number for an award. For example, if the records showed that Ima Lid, KA7URT, was awarded number 20 Worked All Zones on 20 meters, but Kinda Strange, KE7PL, provided proof that he also received the same award number. Well, let's open this up for discussion. My suggestion is to number KA7URT No. 20a and KE7PL no 20b. Does this sound fair?

When I received the awards files from Dale, it appeared clear that not all documentation was saved for all awards. That makes it mighty difficult for me to say that KA7URT is out of luck just because whoever did the awards then didn't keep the documentation on file. Let me know what you think on this.

73 & 88 **de Betsy, WV7Y** ■

WV7Y QSL ROUTES

68AS via N9AG

TJ1MR via F6FNU

R420A via UZ6LWZ

KP1 via N0TG is 2120 Reverchon Drive, Arlington, TX 76017-4566

VP2V/KB5GL via Home Call

VP2V/W5ZPA via Home Call

RO4OA via SP9HWN

UW9CX Box 146, Ekterinaburt-131, USSR 620131

5N0ETP via N6QLQ

LY2BH via Box 112, Panevezys 5309, Lithuania

5V7RC via OZ1LLC

VP25EHF via KA3DBN

UW0FZ Box 140, Sakhalin Island 693000, USSR

RW9JB Box 129, Surgut 626400, USSR

CU3EM Paul Borges, Box 158, 9702 Angra City, Azores

Keep the letters and the QSL routes coming and I will look for you in Dayton.

73 & 88 Betsy WV7Y

WV7Y @ WB7NNF.#SPOKN.WA.USA.NA

SOFTWARE

DAYTON ROOMS

The RTTY Journal still has some rooms available. If you need a room, contact Dale , W6IWO, either by phone or FAX immediately.

Jim Mortensen, N2HOS
P.O. BOX 328
Indian Rocks Beach, FL 34635

A warm welcome to Jim as he assumes the roal of software columnist. Let's all make an effort to help him get started by writing to him with our questions, comments, hints, and ideas. As Jim outlines below, the door is open and the mail box is waiting.

THANKS JAY

Jay, WS71, brought a level of expertise too this column that will be sorely missed. I admire people who both write high powered computer code and get paid for it. He does it well and his professionalism burnished the comments. He claimed not too have written a single line of code for RTTY or contesting software but his grasp of the subject made it easier for us all. We wish him well as he migrates to other pages in this venerable magazine. Thanks Jay for a job well done.

His replacement in not only an amateur radio operator but a tyro software guru as well. I create batch files to make life simpler, but I can neither write code nor have any interest in learning how in this, my 67th year. Other pursuits dominate the agenda. I am a software user, a consumer, always at the keyboard of one computer or another. And I need protection from the iniquitous software vendors of the world. So look not for articles explaining the intricacies of code structure, but expect information about the purchase, use and consumption or destruction of products called computer software.

HELP WANTED

Two objectives will shape each column. First, judicious opinions will be aired (mine or others) about the good or bad news about specific products. Straight, often controversial talk will be the order of the day. Second, shared experiences will be a part of almost every column. Most of us master at least one program through either extensive use or diligent trial and error. The main arrow in our software quiver, we know more about it than most professionals. With me it is Excel, or maybe my word processor. With you it may be a data base or terminal program. I know some of these hidden experts and have solicited their input. Now I ask for yours. We all need help with new applications and upgrades, appreciate insights on old programs that sit around on our hard disk and can always benefit from the secrets of the power user of any program. So don't delay. Write a column or a note, but share it now even if it is a story of absolute failure. Reach me at 813-596-3105 for the balance of the winter, on APLINK at TG9VT or link with my PAMS mailbox on 14.067 (switched to 7073.5 at 0300Z.) I monitor around the clock.

IT'S A DOS WORLD

I migrated to the MS-DOS world full time this past summer. The onset of System 7 for the MAC convinced me to give up the folly of maintaining two operating systems under the same roof (or roofs in my case.) Thus the client mandated DOS won out. Besides, it would have cost $2800 to upgrade the old MAC II to exploit the new system. The gear sold to a willing buyer at surprising prices, enough to fund the purchase of a 386/25 machine and an HP Laser Jet IIIP. Since then I have been trying to accomplish the MAC look and ease of operation in the DOS jungle.

THE BRAG TAPE

My environment here shapes the way I think about software, so let me give you a rundown of what I have on the disk. Spreadsheet and word processor programs combine to earn the green stamps to fund the fun part of the machine. Microsoft's great Excel hogs disk space because it requires Windows. I have used it all the way back to Multiplan 1.0 and by now have spent one billion pesos on upgrades to the current 3.0. The next upgrade may bring forth rebellion. MS Word for Windows is on the disk but sits there unused (it is only 5 megs or so!!) It cannot touch PowerText Professional, a program than can do anything with words for a memo to a book (printed both sides and ready for cutting and binding into a 250 page paper back.)

Under PowerText rests three valuable programs, each available at a keystroke. Writer's Toolkit is big but worth the space. It contains the American Heritage Dictionary, Roget's Thesaurus (both of which enter the screen complete with the word following the cursor in your text) and a dictionary of quotations. Other programs involving grammar, structure and hyphenation come with the package but are not loaded. Info-Select, a pop-up data base is there laden with notes and ideas of many descriptions. We will talk about it again in a future column. Finally, the Seiko label printer. This little gem is my solution to the envelope problem (there are many other uses and I hope to do QSL cards that way.) The software captures the address from the word processor and prints out any attractive label.

Next door, Grammatik awaits the call for use when the time comes for the speller and the lecture on grammar. It is a wonderfully effective package and at a minimum makes me think I write better than before. Hi!

Things get more interesting and/or relevant in other parts of the disk. The RTTY/AMTOR/Packet lineup, for example. It contains CompRTTYII and PAMS to run the Hal PCI 3000 board; Packratt II for packet; and any other program that happens to be needed at the time. All of the above are on line all of the time under the multi-tasking direction of DesQview. Another look at that powerful program is on the agenda. If you have a question or point-of-view about DV let me hear it.

There is also a selection of contesting and logging programs that are still being evaluated. They rest next to the now unused TNC programs that have been sidelined by the presence of the PCI-3000. More on those in months to come.

Then the "necessaries" like Windows (because of Excel) and the Norton Desktop For Windows, utilities, etc., crop up. It takes a big inventory and a big disk to hold them all. Every time that I page through the root directory the "remaining space" number jolts me. It disappears so fast these days. Speaking of which brings us to the lesson of the month.

SAVE YOUR MONEY DEPARTMENT

The Toshiba 286 laptop is a backup machine and often used. It's mini-20 meg hard disk fills up despite the regular clean-up campaigns. Aha!, I thought, I need data compression. Stacker 2.0, prominently advertised and claiming eight years of experience, touted the product as "guaranteed safe...100% compatible" for laptops. (They also make accelerator cards for full sized PCs.) "No loss of speed" and "easy to install" were among the other claims. So for $89 at the Pc-Connection, what can you lose? In a word, data..all of it! The product installed beautifully down though the Norton Speedisk routine, at which point the screen asked for a reboot. I complied...and ZAP! The machine booted normally, then stopped and simply said BAD COMMAND INTERPRETER. My options were limited to rebooting with the DOS disk. Nothing resuscitated the drive "C" prompt.

One futile hour on the phone to California (my nickel, of course, at daytime rates) finally produced the following; "Oh, I know what it is, Stacker doesn't work on Toshiba DOS. We found out about that after the product was released." I said, "Do you mean that you didn't try the product on the second most popular laptop on the market?" "Yes, that is what happened. Sorry."

Needless to say, the disk has been reformatted and the refund is in the mail. Four days later, six days after I had FAX-ed the information to them, there was a call on my answering machine outlining yet another incorrect approach. Timely support? Forget it. To add insult to injury, yet another call came through a few days later suggesting that "when I get Toshiba DOS 5.0 that I think again of there product." My response was brief but easily understood.

Subsequently I discovered that Dr. Dos 6.0 has a file compression utility. After buying the program I found the wrong disk size in the package. Conversion is difficult so I must wait. We will pick up that story later on.

Next month, if all works as planned, we will look at CompRTTYII for the PCI-3000 after using it in the ARRL RTTY contest.

73 & may 1992 be your year!

de Jim, N2HOS ■

Annual RTTY Dinner

Radisson Hotel - Dayton, Ohio
Regency Room
Saturday April 25, 1992

Buffet Dinner with trimmings

Assorted Salads

Fresh Vegetable tray

Whipped Potatoes and green Beans Almondine

Steamship Round of Beef (chef carved)

Breast of Chicken in Wine sauce

Baked Whitefish in Lemon butter

Variety of French pastries

Asssorted Breads & Butter

No-host bar from 6:00 to 7:00
Dinner promptly at 7:00

Tickets $23.00 per person

Tickets must be ordered in advance. This is necessary to meet Hotel requirements. Please order your tickets as soon as possible from Steve.

Make your check payable to:

Steve Waterman, K4CJX
5828 Beauregard
Nashville, TN 37215
Tel: (615) 665-0952
FAX: (615) 320-6144

A short program follows the dinner where our guest speaker will be David Larsen, KK4WW, who will speak on his trips to the USSR. Special announcements will follow David and then the door prize drawing will take place.

Dayton Agenda 1992

Arranged by Steve, K4CJX, but subject to change

- Thursday Evening - Get-together in cocktail lounge of Radisson Hotel. This is a tradition for those who arrive on Thursday.

- Friday A.M. - Flea market is open real early. Suggest you check it out or sleep late. Hamvention officially opens at 12:00 noon.

- Friday Afternoon - 4:30 to 6:30 APlink SYSOP meeting. Meeting will be held at Radisson Hotel in the Premier Room which is the same room used for the RTTY Journal hospitality suite. Vic Poor, W5SMM, will conduct this special seminar. This will be your oportunity to find out about the new Windows 3.0 APlink software.

- Friday Evening - APlink gang plan a no-host dinner at the Barnsider restraunt. After dinner back to the RTTY Journal hospitality suite for comraderie and libation. This is a must. Friday night always draws over 50 digital hams to the suite which opens for guests at 7:30 P.M.

- Saturday A.M. - Back to the Hamvention for more of the same fun you had on Friday.

- Saturday Noon - Digital Digest forum. Jay Townsend, WS7I and Vic Poor, W5SMM will be the featured speakers. Arrive early, as seats go fast for this forum.

- Saturday Night - RTTY Journal sponsored dinner at the Radisson. After dinner, back to the hospitality suite for more of what happened on Friday night. Suite opens about 9:30 P.M. after dinner.

SARTG WORLDWIDE RTTY CONTEST RESULTS 1991

Single Operator - All Bands

Nr	Call	Score	QSOs	Pts	3.5	7	14	21	28
01	LY1BY	931980	505	6340	16	15	56	53	7
02	LZ5RY	821895	445	5235	12	23	56	52	17
03	I2HEO	804830	436	5330	8	19	58	50	16
04	HA6PX	694980	403	4860	11	22	53	40	17
05	OH2BP	585000	338	3900	15	20	47	55	13
06	OH1AP	511360	348	3995	8	18	41	53	8
07	JH1BIH	457040	288	3940		1	52	52	11
08	IV3ZDO	456565	290	3595		17	46	46	18
09	OD5NG	433780	330	4715			48	36	8
10	NO2T	432880	293	3865	2	10	52	48	
11	NJ0M	409800	272	3415	11	17	50	42	
12	GOARF	405195	277	3405	15	8	49	38	9
13	PA3DBS	380600	274	3460	1	14	41	44	10
14	EA5FEL	377190	299	3810	3	3	39	41	13
15	I2TQU	358530	287	3230	8	13	51	33	6
16	HA6EK	336560	252	3005	9	15	37	37	14
17	OH2LU	303850	249	2950	1	1	44	43	14
18	W1BYH	289710	219	2610	7	18	50	34	2
19	SM4AAY	269700	248	2900	8	3	50	32	
20	YO6JN	256410	227	2590	9	16	35	28	11
21	N6GG	228160	213	2480	8	17	41	26	
22	VE6ZX	221160	256	2910		10	39	27	
23	IK0CNA	215130	190	2130	2	16	34	44	5
24	OZ9GA	204750	185	1950	15	18	41	25	6
25	Y23IL	181170	170	1830	15	18	32	31	3
26	DL6RAI	179740	159	2090			45	40	1
27	VE6KRR	128800	167	1840	5	14	30	21	
28	OZ1IWE	123975	129	1425	8	12	32	27	8
29	VU2SJV	121440	127	1760			36	20	13
30	SM6BSK	115020	126	1420	14	11	25	26	5
31	SM4RGD	114760	136	1510	15	19		38	4
32	KB3TS	109550	116	1565	4	6	35	25	
33	KI4MI	108860	114	1430	4	7	37	28	
34	LA7AJ	107030	117	1390	5	11	32	26	3
35	LA0BX	105840	137	1470	13	8	23	21	7
36	UW1YY	99540	138	1580		2	42	19	
37	SM6ASD	95900	117	1370	3	18	22	27	
38	WB9B	86250	105	1250	4	11	29	25	
39	W8LNK	81900	101	1300		8	32	23	
40	AH6JF	78795	105	1545		8	23	20	
41	5N0ETP	77250	105	1545			36	13	1
42	W4IF	71400	90	1275			30	26	
43	WA6VZI	68625	99	1125	4	13	25	19	
44	EI3GC	68400	103	1140		11	16	30	3
45	UB4HQ	63865	110	1205		4	17	32	
46	SM5FUG	58500	85	975	6	12	25	11	6
47	I4XQG	57570	90	1010		7	27	16	7
48	WB6ZHN	53070	79	870	3	11	33	14	
49	G4MKO	52260	84	1005		3	9	30	10
50	W8PBX	40725	62	905			27	18	
51	SM3DHF	39360	76	820			26	16	6
52	IV3DHD	36480	68	760			8	25	15
53	WN1E	35525	67	725	2	2	21	22	2
54	SM7BGE	35420	71	805		1	12	31	
55	Y21NM	28820	61	655	5	3	15	16	5
56	WB4UBD	27930	50	735			17	21	
57	OZ1FGS	26130	61	670		1	21	17	
58	W4/TF3KX	25200	54	600		9	21	12	
59	IK2IKW	24420	52	555	10	4	17	13	
60	W3KV	24375	44	625			27	12	
61	DJ9IR	22610	56	665			10	22	2
62	VK3EG	20295	43	615			24	9	
63	DF6ZY	18975	51	575			21	9	3
64	LA2IJ	18725	535	12	8	15			
65	WA1MPB	18720	42	585			14	18	
66	W2KHQ	17825	42	575			19	12	
67	DK5KJ	17360	50	560			16	12	3
68	KB8GQT	17325	40	525		1	10	22	
69	JA2NNF	13950	41	465		6	21	3	
70	I1VTX	9130	38	415			17	5	
71	KA1LMR	8970	25	345		3	15	8	
72	PA0SOL	8500	42	425			17	3	
73	K8CV	7560	29	420			11	7	
74	K2RYI	5940	22	270			12	10	
75	HA6ZQ	5880	25	280			6	15	
76	WB2UEF	4845	22	255			4	15	
77	DK7FP	2870	16	205			5	9	
78	K7SDW	3280	21	205		8	8		
79	VE5SF	1350	12	135		2	8		
80	HA6SF	1170	15	130			3	6	
81	SM7RTQ/QRP	570	8	95			4	2	

Single Operator - Single Band

3.5 MHz

Nr	Call	Score	QSOs	Pts	3.5	7	14	21	28
01	IK4BWC	4560	30	285	16				
02	OZ9GA	3750	25	250	15				

7 MHz

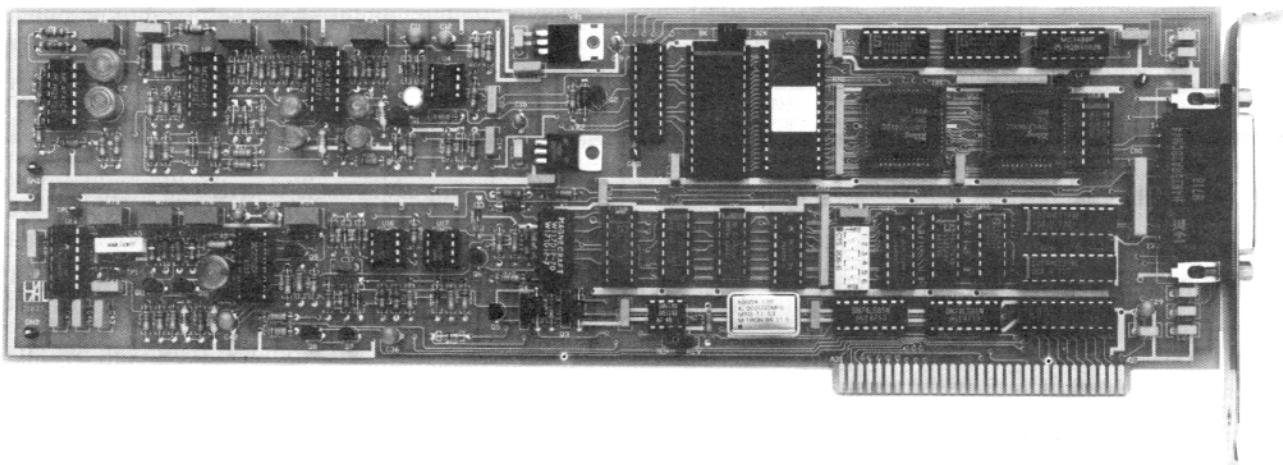
Nr	Call	Score	QSOs	Pts	3.5	7	14	21	28
01	YB2OK	16100	50	575		28			
02	W2UP	14040	41	540		26			
03	DK1VL	9030	48	430		21			
04	W1BYH	6300	34	350		18			
05	SM4RGD	4370	22	230		19			
06	JA7NNF	540	9	90		6			
07	SM4CMG	90	2	30		3			

14MHz

Nr	Call	Score	QSOs	Pts	3.5	7	14	21	28
01	IK1NDB	142305	216	2685			53		
02	EA6ZP	135500	221	2710			50		
03	OD5NG	130560	189	2720			48		
04	IN3VZE	127875	194	2325			55		
05	WF5E	122400	210	2400			51		
06	I2DJX	114500	189	2290			50		
07	VP5JM	106260	214	2530			42		
08	I2KFW	104780	166	2015			52		
09	SM4AAY	88250	152	1765			50		
10	JE2UFF	87465	132	1785			49		
11	JH7QXJ	87290	148	2030			43		
12	CN8NS	84255	139	2025			41		
13	VE6ZX	83265	187	2135			39		
14	IV3KCB	79625	150	1625			49		
15	SP5ALV	71720	146	1630			44		
16	WS7I	55000	122	1375			40		
17	HK4EGW	50320	100	1480			34		
18	OZ7XE	41230	100	1085			38		
19	OZ4FF	38295	90	1035			37		
20	VE6KRR	37350	116	1245			30		
21	VK3EBP	37000	69	1000			37		
22	VU2SJV	35460	71	985			36		
23	I4IBR	27540	71	765			36		
24	SP9BCH	24160	68	755			32		
25	WB4ETY	23360	64	730			32		
26	IK4BZR	22400	64	700			32		
27	W8LNK	22400	54	700			32		
28	VK2BQS	18200	48	700			26		
29	WB8B	17980	54	620			29		
30	OZ1IWE	16640	45	520			32		
31	Y31NB	16380	54	585			28		
32	Y41HL	15730	59	605			26		
33	LA0BX	14375	56	625			23		
34	SP7FQI	11615	46	505			23		
35	OK2BXW	10800	44	540			20		
36	V27TN/A	10500	38	420			25		
37	OK3TEG	8280	45	460			18		
38	W4JLS	1815	13	165			11		
39	K7OSR	1440	11	160			9		
40	DL2DBS	1080	14	135			8		
41	OZ1LSV	930	16	155			6		

Continued on page 20

A Winning Combination . . .
The PCI-3000 and SPT-2 from HAL!



The HAL PCI-3000/PC-AMTOR system is designed to put your PC on the HF bands with outstanding performance at an affordable price. Amtor allows you to get through when other methods fail. If you've ever been DX-ing with someone on Amtor when 20 meters dies out in the evening, you know what we mean. Things may slow down, but you can usually keep up the QSO!

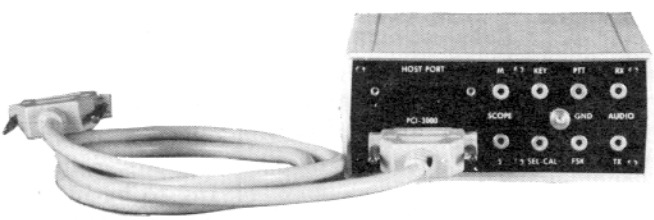
The PCI-3000 doesn't limit you to Amtor. You also get high-performance Baudot and ASCII RTTY, CW, and Search Mode. Search Mode lets you simply tune in the signal—we take it from there. The PCI-3000 automatically finds the correct code, speed, and polarity. No more guessing!

If you want to communicate on HF, do it right with the PCI-3000! Call HAL Communications—your AMTOR source—and put your PC on the air today!

SPT-2 Spectra-Tune:

For ease of tuning your PCI-3000, add the SPT-2 Spectra-Tune. The Spectra-Tune lets you tune in CW and RTTY signals quickly and accurately with a calibrated linear 30-segment bar graph. The bar graph represents a 600 Hz range of the audio spectrum, centered at 2210 Hz for RTTY and AMTOR, and 800 Hz for CW. Calibrated marks indicate the proper frequency for AMTOR, RTTY, and CW tuning.

A cable is included with the SPT-2 for providing power and control from the PCI-3000. The rear panel of the SPT-2 provides convenient "RCA" phono connectors for all radio connections. This avoids having to make radio connections directly to the PCI-3000. Enhance your PCI-3000 system with the SPT-2 Spectra-Tune Today!



HAL Communications Corp.
P.O. Box 365
Urbana, IL 61801
Phone (217) 367-7373
FAX (217) 367-1701

PCI-3000/PC-AMTOR with software **$395.**
SPT-2 Spectra-Tune with cable **$169.**
FIL-1 Amtor/RTTY filter (installs in SPT-2) **$69.**

(Low tone export models available.)

PACKET

DAYTON ROOMS

The RTTY Journal still has some rooms available. If you need a room, contact Dale , W6IWO, either by phone or FAX immediately.

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

Richard takes on the controversial topic of Attended/Unattended Automatic Operation but leaves space to help us with Mic input levels.

ONE MORE TIME!

For the past several years, there has been forwarding of message traffic using packet. This forwarding occurs on two fronts. The largest forwarding system is designed around VHF and UHF frequencies. The FCC has no qualms with stations using these bands, either with their stations attended or unattended. What the FCC has qualms about is unattended operation of a packet station on any of the HF bands. If a packet station goes haywire, the interference will just end up being local if the system is on VHF or higher. If the station went haywire on HF, the implications will be world-wide.

In order to allow intra-continental to occur at a faster rate and not to tie up the VHF circuits, the ARRL sent a proposal to the FCC to allow a small group of people to operate forwarding stations on HF. These selected few stations would be part of a test sponsored by the ARRL to prove the feasibility of HF packet forwarding, to the FCC. If the feasibility could be proven, they hope to have the FCC proceed to relax rules concerning the ban on unattended operation of packet stations on HF.

The FCC, based on the proposal from the ARRL, issued a Special Temporary Authorization (STA) to the ARRL to prove to the FCC the purported feasibility of HF forwarding. The STA was issued several years ago. The ARRL has requested and granted several extensions by the FCC to continue their study.

Maybe I am being an old fuddy here but how can it take several years to study the feasibility of packet forwarding on HF? I do not believe that there is a study going on and the STA is being used as a legal whitewash. This study should have been completed AND PUBLISHED in about two years. There is a "funny" rule of thumb that says that a test should be run long enough to gather data that will support the hypothesis. It is possible that the ARRL is following that idea.

In my personal experience of using digital modes on HF, I prefer to use either AMTOR or RTTY. I avoid packet because of the requirements to receive a packet are so exacting. The basic requirement is that the packet be received ERROR-FREE. HF is a lousy band to expect error-free transmission all of the time. I get tired of waiting for a response from another station when using HF packet. If I am operating RTTY and I get a bad character, so what, I know what the person is trying to send. If I can' t make out what is being sent, then I ask for a re-transmission. AMTOR is even more interesting. The problem that I run into deals with propagation fades and not noise. With Packet a noise burst kills a whole packet transmission.

I have two responses to offer to the latest renewal that the ARRL requested and was granted by the FCC. To the FCC: Force the ARRL to submit the results of the STA immediately or revoke the STA. The ARRL will whine and pout about it but it will have to get on the ball. Their study is taking way too long to prove that HF is either an unreliable or reliable means of forwarding using a very demanding protocol. To the Ad Hoc Digital Committee of the ARRL: Get off the mark and acomplish something. Publish the results of your inefficient testing of HF forwarding or disband the project and cancel the STA. To both groups: Five years has been long enough to prove or disprove HF forwarding. Do something with it or you are proving to be just as inefficient as most government bodies are.

ON THE LEVEL

Setting the level of a packet transmission can be quite difficult, especially for VHF transmissions. The setting procedure is, however, easier for HF transmission. The procedure is quite easy to perform. Put the TNC into Calibrate mode. The TNC is then requested to transmit both tones at the same time. The mic level is adjusted to keep the ALC needle on the left peg. If the ALC circuit starts affecting the signal, distortion will creep in and make your signal unreadable. Another tip that I can offer is to pay attention to your wattmeter. If your rig puts out 100 watts, I suggest that you adjust the gain to put out about 80 watts of signal. The 20 watts of difference will help minimize distortion from the finals. By not running your signal to the limit of your amplifier, your signal is cleaner and will be copied easier. You already have one major strike against you just by using HF and all of the variances that go with the band.

Adjusting your signal on VHF and higher is different and can be more difficult without the proper equipment. The easiest way is not the most accurate way either. The easiest way to adjust your levels is to use another receiver of some kind tuned to the transmit frequency. You put the TNC into Calibrate mode and engage the radio transmit function. Set the TNC to send the high tone. While listening with the second radio, adjust the output level of the TNC to a point where you start noticing the received level dropping. Stop there and that adjustment will provide you with an adequate setting to use. The other way of adjusting the TNC and radio combination is to use a service monitor to aid in adjusting the deviation of your transmitted signal. Considering that there are many forms of interference present, it is prudent to start out with the best signal possible.

Adjustment of the receive level will take a bit of experimentation on your part. If someone is sending out a bad signal and you try to adjust to it, you can end up chasing your own tail and getting nowhere. On VHF, volume setting is quite easy. Usually you are dealing with full quieting signals which make life easy. All you have to do is to make sure that the lights on

the front of the TNC look the way that the book says they should and life will be fine. HF is a completely different animal and I mean animal. The two biggest problems with HF packet are propagation changes and collisions. HF propagation is a very dynamic creature and can change drastically during a transmission. These changes will impose errors on the received signal not allowing decoding. That can't be eliminated. Collisions can't be eliminated. Everybody can't hear everyone else on HF so the collision problem will always be there. The tone sense circuits that are used in TNCs are not that forgiving. They have to hear the proper signals or they think that the channel is busy or empty. You as an operator may know that the channel is busy but the TNC may think that the channel is free and key up therefore trashing the channel. The other scenario may be that the TNC thinks that the channel is busy when in reality it is quiet. This can be caused by noise and static bursts. Real fun, isn't it? I do not mean to paint a gloomy picture of HF packet but facts are facts. One of the creators of Packet even says that the mode should not be used on HF. The gentleman is correct in his statement. If you want to work HF packet, it will take more patience to do so than VHF operation.

ABOUT LAST MONTH

Apparently I hit a nerve with someone. Last month I presented a parable concerning two cars that were imitating two processor chips. Well, I have more information for you. It appears that several other chip foundries will be coming out with their own versions of the Intel 80386 chip. This scenario is reminiscent of the IBM PC startup where they started the market and others improved the systems to a point where it was not prudent for IBM to continue making PCs in their old configurations. This whole process is going to be interesting.

ABOUT NEXT MONTH

This month's article is a little shorter than usual. Nothing has gone right here this past month with resultant trips to the hospital for family members injuries and my own bout with the incessant flu bug. Next month we will get into how to find out what is on the frequency that you are listening to. If all goes well, we will also cover how to do a connect. It will be fun. Until then - **de Richard, N6NKO** ■

21 MHz

Nr	Call	Score	QSOs	Pts	3.5	7	14	21	28
01	OH1AF	114745	165	2165				53	
02	JH1BIH	110500	152	2125				52	
03	OH2BP	87175	127	1585				55	
04	IV3ZDO	73370	119	1595				46	
05	OH2LU	67940	126	1580				43	
06	IV3UT	47945	90	1115				43	
07	IKOCNA	46420	89	1955				44	
08	G4MKO	22350	59	745				30	
09	EI3GC	20700	61	690				30	
10	ES7FU	18750	61	750				25	
11	KI4MI	15820	42	565				28	
12	YO5BAT	12285	54	585				21	
13	W4/TF3KX	1800	11	150				12	

28MHz

01	SM4CJY	1080	14	120					9

SWL Operator

01	ONL 383	595170	338	3890	17	22	52	51	10
02	W1/G8LCK	302640	239	2910		15	50	39	
03	I3-60771	231000	210	2310	14	16	44	24	2
04	I1-1169/GE	168000	140	1680		15	40	39	6
05	G6LAU	131555	144	1585	7	12	35	26	3
06	BRS27239	106215	133	1455	5	10	32	22	4
07	F11ADB	63840	102	1140			29	27	
08	SP4-208	26180	57	595	11	6	16	11	
09	I7-237/BA	16240	55	560			19	10	
10	DE0GMH	2380	16	170		3	5	6	

MULTI Operator

01	UZ9CWA	1595650	574	8225	14	30	67	64	19
02	LZ2KIM	959340	482	5420	18	25	57	58	19
03	SK4RY	928365	439	5245	17	31	59	49	21
04	JJ3YBB	452580	284	3970		3	45	53	13
05	OK1KSL	355180	248	3010	12	15	49	40	2
06	VE7ZZZ	338200	300	3560	7	14	43	31	
07	OZ7SAC	73500	109	1225			27	22	11
08	OK3RJB	25345	61	685			10	21	6
09	EK9QRP/8	18500	51	740			25		
10	PY2HF	6700	25	335			2	18	
11	SP4KTO	3315	18	195	6	2	4	5	

Operators of Multi Op stations

UZ9CWA - UV9CAF, UA9CGA

LZ2KIM - Krassimir Kossev, Steve Ivanov, YL Zorry Ossikovska

SK4RY - SM4CMG, SM5CZD

JJ3YBB - JA3CZY, JA3FHL, JA3LHL, JA3PJL, JA3FQF, JH3UHG, JH3LLV, JE3TXA

OK1KSL - OK1AHG, OK1AQ, OK1FMI

VE7ZZZ - VE7ARS, VE7AV, VE7EME, VE7RBL, VE7SK, VE7SSS

OZ7SAC - OZ2CJ, OZ1LRW, OZ1LSV

OK3RJB - Radioklub OK3RJB DDM

EK9QRP/8 - RA9CLP, UW9CX

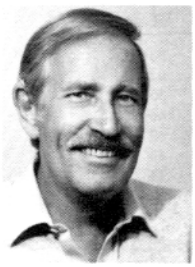
PY2HF - PY2HF, PY2NY

SP4KTO - Klub Tacznocsi Lok

CHECKLOGS

F6IIE, SP7FQI, W2UP, K6SPQ, KN2MN, WA6VZI, FS5UG, SM5EIT

Report submitted by Bo, SM4CMG



DX NEWS

DAYTON ROOMS

The RTTY Journal still has some rooms available. If you need a room, contact Dale , W6IWO, either by phone or FAX immediately.

John Troost, TG9VT
P.O. BOX 524263
Miami, FL 33152-4263

Most Wanted Countries List

If I look over the Survey of Most Wanted Countries on RTTY, made last year, there are sure a few changes self-evident. Such countries needed by 100% of all RTTYers, like **SAN FELIX, SOUTHERN SUDAN, ALBANIA, RODRIGUEZ ISLAND, ST. BRANDON,** and **M.V. ISLAND** are nowhere near the top of the list. Soon **SOUTH SANDWICH** and **NAVASSA** will be off the list. And now I start hearing about a major necessity for places like BERMUDA.

MOZAMBIQUE has been quite active lately with various stations. You may not have your QSL yet, but it will surely come sooner or later. Possibly not with the speed of the incomparable ZA1A Cards, but in spite of our complaining, eventually the cards get there, with very few exceptions.

Of course these happenings in '91 appreciably changed the list of those Countries we most need. Last year, with the help of I5FLN we presented you with an "In-Depth Survey", which included the Amateur history of some of the rarer countries. But Reader Participation was not at the level it was in 1990. Hence, I would like your opinion if we should again in 1992 make a Country Survey, or skip it till next year, when possibly some new Countries will be recognized by the ARRL, such as CROATIA, SERBIA, NORTH KOREA. Some are budding new Republics in the former USSR, like CRIMEA attempting to become independent for the UKRAINE, BOUGAINVILLE, who seceded from PAPUA NEW GUINEA and now has made arrangements to issue it's own Amateur Call-Signs. The first one supposedly being A15A. (WFWL)

On the other hand, some Countries are possibly disappearing from the DXCC Country List: The Military Base on **MIDWAY ISLAND** will probably be closed, as well as the Loran Station on **KURE ISLAND**: both islands would then revert to Hawaii and both KH4 and KB7 may be deleted from the DXCC List. There is a joint agreement on combined administration of **WALVIS BAY** between the R.S.A and Namibia. Approval of separate DXCC States for WALVIS BAY was based on ownership of the R.S.A.- a joint administration might cancel that.

DECEMBER HAPPENINGS

As is our habit, there was again quite a bit of griping about the lack of RTTY DX in December and early January. But, really, if you could spend the time, things were not all that bad. Several stations were active from Mozambique and by the time this issue of the JOURNAL reaches you, the **NAVASSA** expeditions should be over, as well as the **BRITISH VIRGIN ISLANDS**, and most likely **VP8BFH** from **SOUTH ORKNEY** will be on RTTY with **IRDXA** gear which reached him the first days of January.

Some of the "goodies" worked in that period were V85XO, 9X5LJ, TY1PS, J68AS, J37ZF, C6AAA, SU1AH, TA5C, ZD8LII, TJ1MR, HS0ZAA, VK9NS, LY2BH, UC2ADX, RC2AZ, UF6AW, UL7MY, RO5OA, YL2JN, 4J7GWG, SV0CR, TK5EP, VU2DPG, XQ0X, 5V7DP, 5V7RC, 5V7RV, BY1QH, CN8BX, BV2BV, Z21HJ, VS6AI, V51JM, VQ9QW, 7X2DX, VP8BFH, 9H1DW, P43FM, V21GC, ZS0Z, (PENGUINS), OX3EZ, P21BS, 3B8CF, FJ5BL, C9RTC, A92FG, 7Q7BW, CO6A, ZK1WL, and many more. Maybe not sufficient to get a DXCC in 30 days, but still a pretty impressive collection.

RAMBLINGS

It was not exactly a White Christmas here in Guatemala. We went to the Farm, at TG4VT, about 100 miles from TG9VT and had a good time, gorgeous and an unlimited view, at 8000 feet. I took a laptop computer, and IC-751 and an Amp along and was just able to control my TG9VT Aplink by volcano bounce. A new way of propagation, I don't seen much use for, other than between the house and the farm. VHF will not find a way, the only way I could get into my home mailbox was by using 15 meters, aim the TH6 at a volcano and if you hit the right one, you can make an AMTOR link, hi. Fun though.

Hope that all your Christmases were as nice and relaxing as mine. Feeling a lot better now, though I am still being stuffed full of pills, but I guess I will make it, for a while anyway.

ADIOS

So with this, I will give you belated New Year's wishes: May the Lord bless you in this year and may the DX be plentiful. And may I help you now and then to be able to find it, or to prevent you from going off on a business trip, just as that rare one you need is coming up.

Many thanks this month go to I5FLN, OD5NG, N2HOS, WA4JQS, VK2SG, TY1PS, W2JGR, W5KNE, WB2CJL and the many others who gave me input to present to you. The Lord willing I will be back next month to bore you some more.

de John, TG9VT, on the Guatemalan volcanos.

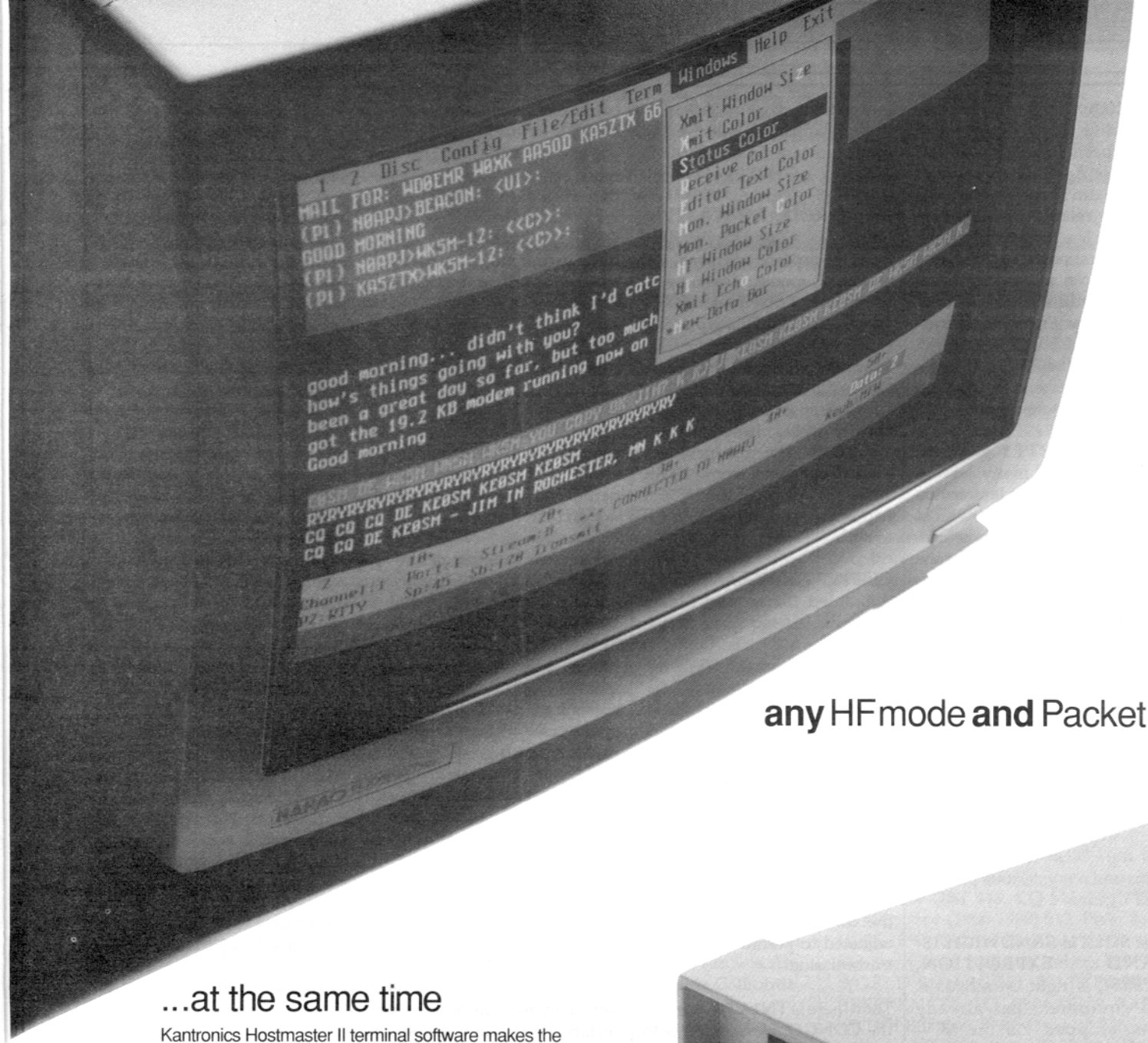
RTTY

CONTESTER'S

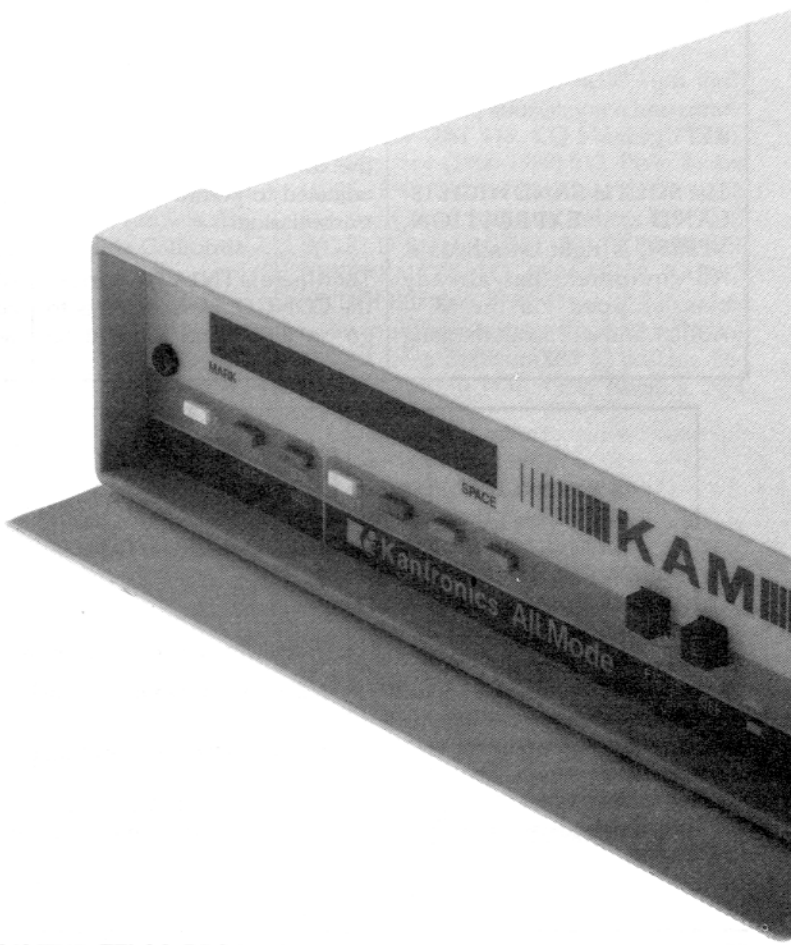
GUIDE

This guide contains all rules, forms and pertinent information to help you enjoy contesting using the digital modes.

More information on page 22



any HF mode **and** Packet...



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John, **XQ0X**, from **ST. FELIX**, is still active a few days a week and expects to be QRV till late March or April. The amount of time he can spend on the air is directly related to his workload. He is a lobster fisherman and he first needs to satisfy the market. We are trying to get some schedule hours for him, specially for Europe and Australia: please check my APlink Mailbox or the RTTY DX notes by VK2SG, where we hope to publish such schedules.

The **IRDXA** RTTY gear for **VP8CFM**, after many adventures, arrived early January on Signy Island in the **SOUTH ORKNEY GROUP**. If you have not heard Brian on the air by the time this issue of the JOURNAL reached you, you can safely hold your breath, he should be up any minute. To get the gear to Brian, it had to be sent to the very Southern tip of Chile, and from there by DAP airlines to Port Stanley on the Falkland Islands, just in time to catch the Royal Navy Supply Ship, where Bob, VP8BFH, put it on board. And don't think that trans-shipping thru Chile was not a problem with local customs and a mysterious piece of RTTY gear.

The **SOUTH SANDWICH ISLAND EXPEDITION, VP8SSI**, is right on schedule. All equipment has already been shipped via the M.V. ABEL J. and will await the gang when they arrive in Port Stanley by plane in mid March. The operators are Mas, JE8MAS, Martti, OH2BH, Tony, WB4JQS, Terry, W6MKB, Ralph, KOIR, Al, WA3YVN, John, W7KNT and David, KJ9I. Four complete stations, all bands, all modes. This may be the event of the year! RTTY gear by IRDXA. This trip surely deserves support. If you wish to be generous or stingy, please send your contribution to Gerry Branson, AA6B, 938787 Dorsey Drive, Junction City, OR 97449. The group would plan an operation from **PETER 1 ISLAND** later, if the VP9SSI trip is the success we expect it to be.

CLIPPERTON ISLAND is still scheduled for around March with **IRDXA** equipment for RTTY: The latest scuttlebutt is that they are short an RTTY operator. Any volunteers? If so, contact Jay Kobelin, **WA2FIJ**, 10628 Grandview Drive, Rancho Cucamonga, CA 91730.

There is RTTY gear available on **MAYOTTE**, with **FH8CB**, but he blew his Transceiver when he tried to get it on the air. With the help of Jean, F8XT, he will make another attempt and get the conditions more properly adjusted to permit continuous transmission.

Then there is **TN1AT**, Andre, in the **CONGO**. He is anxious to go on RTTY and thought he could use an old Siemens machine, if he could get the right paper and ribbons. Did not work out that way. He is now in contact with the well known RTTY Expeditioner, Henry, DJ6JC, who at this point is planning to donate a small computer himself and go to the Congo to give Andre the necessary training. Pray for that one!

Then there is Al Pearce, who is moving back to the **SALOMON ISLANDS** late January and estimates that by early February, he will be running full steam on RTTY. Please be patient as he is new at the game, nor do I have his Call-sign yet.

A lot seems to be happening in March. A group from the Oklahoma DX Assoc. will be active from **BELAU** from March 1-15. Though they will work the ARRL Phone contest, outside of that they will be active on all bands and modes. One of the operators will be the famous AD1S. No callsign yet.

REVILLA GIGEDO, XF4, will be active again as XFOC from February 4 thru 16, all modes, by Hector Flores, XE1BEF.

Then there will be another major **AFGHANISTAN** Expedition led by UJ8JMM and UT4UX. The call will be **YA5MM** and the operation will run February and March. Not certain how much emphasis will be placed on RTTY. There is a good chance that UJ8JMM will be going to **NORTH KOREA** if the YA expedition is a success.

We are still confident that ZL1AMO will make his long awaited trip to ZL8, **KERMADEC ISLAND** in March, as planned, with his Laptop donated by N2HOS and his KAM from **IRDXA**, hopefully bolstered by some contributions from our faithful DX Readership, to cover the 20 K (and some) cost of transport. That will be a new one for many of us..

BANGLADESH seems to be **MESH** (mess).. does that rhyme? Jim Smith spent a few weeks hanging around the place, awaiting his license and operating permit which had been faithfully promised to him by FAX and phone conversation. Then the government decided that first locals would be licensed, but the qualified locals were in Sweden, checking out the differences between local stock and Swedish. Guess the Swedish stock won, as they did not hurry to get back. Anyway, it is a mess, but sooner or later, probably in 1992, Bangladesh will have radio law and procedures as to how foreign nationals can operate.

73 and GL **de John, TG9VT** ■

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