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RTTY JOURNAL™

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Bob Canning, G0ARF, operates from his vehicle during a recent RTTY contest. His location was from the Radnor Forest site called "Black Mixen." The contest was held 12 Apr 92 and Bob was defending his previous years' win. This information supplied by "Doc" Watson, W7MI.

RTTY DIGITAL JOURNAL

Dale S. Sinner, W6IWO
Owner, Publisher, Editor

All Correspondence:
9085 La Casita Aveune
Fountain Valley, CA
92708-2712

Phone: (714) 847-5058
FAX: (714) 892-2720

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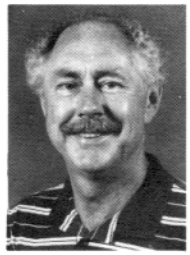


HITS & MISSES

Dale Sinner, W6IWO
9085 La Casita Ave.
Fountain Valley, CA 92708-2712

Digital Committee Update

At the SW Division ARRL Convention in late August, my ARRL Director Fried Heyn, WA6WZO asked me to attend a special meeting requested by local STA operators. Three STA members attended, two other DC members were present, a few specially invited observers, my Director, myself and Lyle Johnson, WA7GXD, (past president of TAPR and past member of the DC). The meeting lasted about three hours and as a result my Director took a proposal to the ARRL EC meeting the following morning. Fried was asked to suggest that further deliberations be continued in regards to Unattended Automatic Operation.

In the last issue of the RJ, I recapped the DC recommendations to the ARRL BOD. Those recommendations were adopted by the board but the STA community felt they were not properly represented. These concerns, as outlined above, were presented to the ECs and they in turn directed the DC to meet again on September 26, 1992. At this special meeting the ARRL has asked that the STA community send five representatives, so that their concerns and proposals could be heard. This was announced by League president George Wilson, W4OYI, at the ARRL forum on Saturday 22 Aug 92. President Wilson, also made it clear that the executive body would not support any type of "Super Ham" group being created.

At this writing the five STA representatives have not been selected and by the time this issue reaches you this special DC meeting will be at hand. I will report the results in the next issue of the RJ. Stay tuned.

New Columnists

Jules, W2JGR, has stepped forward to take over writing the DX News column recently vacated by our dear friend John, TG9VT. Jules is well qualified and I hope everyone will continue to give him the same support given to John in the past. Write to Jules and give him your ideas and encouragement.

Also joining the staff is Richard, N6GG. Rich will take over the Contesting column from Hal, WA7EGA. Hal has had to take a back seat temporarily due to work commitments. He will be back with us from time to time when his work schedule permits. Rich brings with him a wealth of experience in contesting and is always a fearless competitor. He intends to bring you a slightly different approach to contesting. For those of you who have not tried contesting, stay tuned as Rich presents his ideas of how to be a strong contender in RTTY contesting.

READER SURVEY

This month you will find a Readers Survey form on page 21. Please take a few minutes and fill out the form and return it. The purpose of the survey is gather information that will be useful in determining what type of material should be covered in the RJ and statistical information helpful to me in dealing with our advertisers. Both of these purposes are vital to the future of the RJ and that is why I am asking for your input. Thanks.

YOUR INPUT PLEASE!

The RJ has space for stand-alone articles. Many of you have pet projects you have worked on from time to time but have never shared them with anyone. Now is your chance to tell us about your project, gain a lot of recognition, and maybe even some fan mail.You do not need to be a professional writer, simply submit your material and let the RJ take care of the rest.

How about some input from our foreign subscribers? Share your experiences with us. Tell us what is happening in your part of the world. Send the RJ your story and pictures and the rest will be history.

On page 22 of this issue you will find a pictorial presentation that I hope will stimulate your thinking porcesses. Our digital community is growing by leaps and bounds and many of our new ops need help with some of the basics of the digital modes. To those of you with engineering backgrounds and those with teaching skills, these new ops need your help. Step forward todzy and lend your hand to this need.

All for this month.

de Dale, W6IWO ■

SOFTWARE

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

LAN-LINK REVIEWED

Eight pages of single-spaced type comprise the Table-of-Contents. The Readme. Doc on the program disk eats up 373K of space and runs to twenty-five chapters, plus assorted appendices when sent to the printer! LAN-LINK (LL) needs all of that and more because Joe Kasser[1], (W3/G3ZCZ) deems any non-voice RF activity to be part of his domain. And he immediately sets out to conquer and automate the entire catalog of activities in any digital mode. This all-purpose intensity creates a few problems in the manual. The second chapter, for example,, begins at the beginning... "Bringing LL up the first time." "Using the quick menu," "Connecting," etc. It all sounds like a marvelous tutorial for the raw packet recruit. Yet, by page six the subject is "Using Different HF and UHF Configuration Files." The very next page leaps into "Using the AMTOR/PACKET Robot/Automatic Contest Station." Whew! That's the fast-learn mode.

Be assured, as you will read later, that if you can get through the manual, it does work like a charm. The root of the program embeds itself in the claim that "LL automates the use of packet radio." Mind-numbing details, the ever present negative of the packet mode are wrapped into efficient data bullets that speed the process of configuring and communicating. This state-of-the-art handling of the packet mode represents the crowning achievement of LL.

AUTOMATION

"LL automates" is the operative philosophy here. Now encompassing coverage of nine modes, "LL configures the TNC (and even types the commands for you) to maximize the communications efficiency in the mode of your choice." Each mode utilizes to the extent possible the robotic features of the packet element. LL's packet unit is a paragon of design and delivers as promised. Yet, when ported over to the other digital modes in an attempt to create a one-stop digital package, two flaws emerge. One is the mind boggling complexity of the concept. Too few amateurs can or will tackle the monster. Many will give up or restrict their use to the first level of expertise. LL is accessible, but no user will tell you that it is easily accessible! The LL brochure states that it is a "sophisticated program." Translated, that is a sure warning to those who are less than reasonably knowledgeable PC and digital addicts.

The second flaw is more subtle. Extending the automation philosophy to other modes without limit, particularly in the HF bands, creates more problems than it solves. There is a surprising insensitive to the traditional and regulatory differences between VHF/UHF and HF use of the digital modes. It is acceptable in packet to type and then send a C KE2AY without waiting to see if the frequency is clear. No problem for the mode avoids packet collisions that might otherwise destroy the band. The signal remains in the TNC until the band is clear. What about HF? We will return to a further discussion of this flaw soon.

THE USERS SPEAK

Complexity. Jim WA2VOS says it best. "I must admit the big flaw in this program is the documentation. You must print it out yourself and it runs to about 150 pages. While it is not the best technical writing, if you read and reread all of it you will acquire the necessary information needed to use the program." Even then, according to Dieter, KX4Y,"... people who are not reasonably computer literate will be frustrated. At one time it frustrated me almost to the point of giving up." George, AA5OL adds, "Others with whom I have talked find it too formidable. They prefer Acuterm." The evidence is persuasive. All signs point to a program that requires a certain amount of experience and persistence, in about equal measure. Don't try it unless you are prepared for frustration, the baggage that comes along with such a complex undertaking.

Caveats give way now to an appraisal of the program by a group of heavy users. Heavy and enthusiastic users, I should say. Interestingly, each uses but a piece of the program. In combination, however, you gain an appreciation of the scope of Joe's contribution to the digital community. Let's begin with the esoteric. Dieter-KX4Y begins, "If I only wanted to have an occasional QSO with friends or check into a BBS, any program would be okay. But I have a special interest. Using LL at home in Ft. Worth, TX (Dieter is now in Alabama) I succeeded in automatically uploading files to the MIR BBS. Now, I want to be able to automatically sign on any flying BBS, look for mail, upload messages, scan the BBS info by key words, and then download appropriate files. Between using satellite tracking programs with the Kansas City Tracker and LL, I want it all to happen all by itself." And then he goes on to say that he is working with Joe to bring all of this to perfection! Not bad.

He goes on to discuss a few other attributes, particularly the ability to line up ten different destinations through the use of the Alt keys. It saves connect time and his time. Then, Dieter admits that, "I have not investigated many of the other features." He is not alone.

Jim WA2VOS agrees, and says"...there are so many features that LL offers that for the most part I have been unable to utilize them all." He spends about 90% of his time on packet so his favorite features are things like ZAP "Zapping does not mean the electronic destruction of the BBS with a death ray! ZAP, instead, logs on the BBS and...reads the mail...kills and sends mail... then goes on to read all the bulletins the program has selected from prestores keywords. Then it logs off." That macro, at least in Jim's judgment, is worth the registration fee. Everything else is free.

A regular AMTOR/RTTY operator as well, Jim also claims that the automatic CQ in AMTOR is a "... super feature which is my very favorite." It is easy. Press F6 and the program begins to call CQ and will make the call forever, if you wish, in the predetermined pattern. This is the Beacon Mode. When an ARQ contact is made, the program pages the sysop and awaits keyboard input. During the QSO, press the Alt-L key and the station's call and time of contact will be entered into the log book. Nice.

ROBOTICS

One step down the road from Beacon is the Robot mode. Your station can call "CQ contest," conduct a QSO, log it and go on to the next contact. Jim's description (and I confirmed it in the documentation) suggests but perhaps does claim that the entire contest of your choice could be run in absentia. (Great! Now I can contradict the traditional CQWW weekend behavior and take Gen out to dinner, and not miss a click!).

George, AA5OL, goes back to the beginning of LL and has used it for 5-10,000 QSOs in the AMTOR chirp. He believes in shareware, too, and thinks that Joe is the ideal "listening" shareware developer. Logging is high on George's list. When he gets an answer to his CQ, the call sign is displayed at the top of the screen. "In almost 99 out of 100 cases LL will pick it up. Then all I have to do is hit Alt-L and I am in the logging program. The cursor sits at the 'remarks' screen and I can add the name and QTH. The buffer is a bit short for a long name or QTH, but that deficiency is a small price to pay for the overall convenience and ease of use. Alt-S leads me to do a quick search to see if I have had a previous contact." Very high marks from a long user; he describes what is arguably one of the better logging programs available. LL allows the use of varied, pre-selected log files..."your choice as long as the suffix is.DBF." Jim goes on to point out that,"... you can have Contest.DBF, AMTOR.DBF or any other log book that your imagination cooks up."

Another voice chimes in from Canada Hal, VE1LV, is another career LL user. He goes back to V1.47. His modest claim suggests that "LL is and does EVERYTHING!" However, he goes on to say that, "Unfortunately I have only used it on packet, but others in the area have used it on AMTOR and are very pleased with the performance. There are so many features available. I recommend a hands-on demonstration by a skilled user as the best introduction to the program. But one can, by following the manual–well indexed, even by words–learn how to use the program. If difficulty is encountered, Joe is more than willing to provide support. The only restraint is not to contact him via Amateur Radio (shareware is commercial)."

Hal admires the robot packet features as well. "Have you ever worked MIR while sleeping? Well I have! Yes, and I did it with LL." But, says Hal, "My only point I wish to stress is that a green computer operator will require time to digest all the features in the manual! It is not a program that you can sit down with and use all the features in five minutes, even though it is all pull-down menus. Read the manual before ALL ELSE FAILS!" Being human, Hal also admits that he recently stumbled on to a new feature. He didn't read it all either. Hi!

The end note also comes from Jim WA2VOS. "Word wrap is one of the new features. There is also a neat little 'hitch' that permits you to add a bit of pre-written text to the 'over' command (End key). When you hit the key it will transmit some text which in my case does the following-- 'N2HOS DE WA2VOS back to you+?' My own opinion is that is the VERY BEST," says Jim even as he voices some concern about the speed of Joe's response to a call for help.

TRY IT

LAN-LINK is available shareware from PO Box 3419, Silver Spring, MD 20918 (or download it from Compuserve). The registration fee is now $45, but you can obviously try it before you buy it. The Evaluation Disk is only $5. BASIC PACKET RADIO, his new book, stems from his extensive packet experience. It sounds like a comprehensive volume, includes the LAN-LINK manual and costs $29.95 (plus $2 S&H).

THE FINAL WORD

This a splendid product. If anything, it offers too much. That is par for the course, these days. My taste prefers the single-minded approach, the program that delivers perfection in a narrow spectrum. LL offers, on the other hand, high quality in an across-the-board approach. Many prefer that, even if they use but a narrow piece of the pie. The feeling that "it is all there" (when and if they wish to use it) seemingly compensates for the steep learning curve. That is the issue here. If you want to work MIR in the middle of the night without disturbing your sleep, if you are willing to dig into the densely packed manual, if you can master the two dozen hot keys, if you truly wish to automate your entire operation, then LL is worth a very close look. Try it first. Pay for it only if you like it. But be sure to pay for it if you use it. Shareware if not freeware!

THE EDITORIAL

A word or two about automation on the HF bands, if you please. Maybe, perhaps a very thin maybe, the robotic philosophy extends to HF packet. My instincts doubt it and the STA tests tend to support that conclusion. But I know for certain it won't work on HF AMTOR or RTTY. Yet, LAN-LINK offers any user of the program the apparent license to get on the HF bands with a robot CQ, beacon or other unattended signal. The user is not even cautioned about their use, even if the new user reads the manual. Unfortunate consequences flow from this part of Joe's program.

My most unpleasant moments in recent times center on confrontations on 14067 with a band of LAN-LINK users. They claim ownership of the frequency and maliciously interfere with legitimate APlink traffic. This group's primary interest is to protest APlink's use of this "conversational frequency." They use unattended HF beacons to stake their claim and often run them around the clock. Their actions degrade the hobby and produce a form of pollution that is the last thing we need on the digital bands. Other, less militant individuals set up their ARQ CQ robot and add to the clutter on our narrow subbands.Perhaps they know no better. The manual did not help explain the facts of life.

This program, indeed this hobby, could be improved by the outright elimination of this facility for any of the HF modes.

Next month we will take a look at the latest version of Mini-Prop, pass along a few notes about Win3.1 shareware and assorted odds and ends (maybe a comment about the new 486/33). I am still waiting to hear from you Acuterm users. Please write now, in between the political commercials

73 G/L de **Jim, N2HOS**, SK. ■

1. Joe Kasser, P.O. BOX 3419, Silver Springs. MD. 20918

FAIRS UPDATE

On a recent trip by David Larson, KK4WW, Executive Director and this group, VEC exams were given to prospective Hams in the Ukraine and Russia. Assisting David were John Douglas, N0ISL, and Victor Goncharsky, KC1VF, (UB5WE). Exams were given to eight in the Ukraine and 4 in Russia and a total of 6 passed.

Others who accompanied the group were: Gaynell Larsen, KD4GMV, Ron Angert, N4AJT, and Jerry Scheeler. During the visit Daivd and Ron taught workshops on Instrument Automation and local area networking.

David also worked on an exchange program agreement for the Virgina Polytechnic Institute and the State University. As a result of these consultations two Ulyanovsk, Russia citizens visited VPI, SU, and FAIRS headquarters in July. During August, Victor, UB5WE, and his wife were to visit these same institutions.

For more information on FAIRS, see the September 1991 of the RJ or contact David Larsen direct at the following address:

FAIRS
Foundation for Amateur International Radio Service
59 Group
P.O. BOX 341
Floyd, VA 24091

Hornet's Nest

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

I don't think I've seen such emotion, controversy and saber rattling concerning the demise of the FCC STA for HF Packet Radio, since the ARRL supported "Incentive Licensing". Even the early days of Single-Side Band were calm compared to this storm! But, we'll weather this storm just like we've weathered the ones in the past.

I've been hearing and reading so many conflicting stories and arguments concerning this STA that I truthfully don't know which one is correct. For example:

1) My sources indicate that the packet community, specifically those directly involved in the STA, were given ample opportunity to provide the specifics necessary to judge whether full authorization for "unattended digital" operations should have been requested from the FCC. In fact, I'm told that the "old" ARRL Digital Committee had requested supporting details several times, and sufficient documentation was not forthcoming.

Were engraved invitations necessary to pry this information out of the participants?

And now that the FCC has let it be known that they will not further extend the STA, who can blame the "new" Digital Committee for basing their recommendations upon the ARRL sponsored "Digital Survey"? It appears to me that it took a lot of guts and fortitude on their part to come up with any recommendation, as they could have done as the old Committee did, and do nothing! If you were a member of this committee, even though you supported unattended digital operations, could you have voted for it with good conscience, not having adequate documentation from the STA participants, and facing the almost total opposition reflected in the ARRL Digital Survey? If the participants in the STA, now so passionately vocal, had taken the time and interest to more adequately express their desires in the ARRL Digital Survey, might not this controversy have been avoided, or at least tempered?

Why has HF Packet Radio, specifllly that part involved in the STA, been so disliked within the digital community?

I think there are several reasons, but probably most basic is the fact that some of those involved in the STA painted themselves as "Super SYSOP's", blessed with a special part of the spectrum made unavailable to other digital enthusiasts, where what they said was "law", and if you didn't like it, lump it! I'm told that unless you played ball the way "they" wanted it, they took the ball and went home. Instead of welcoming outside input, experimentation, advice and suggestions, some of the STA participants ran their systems as though approval of unattended digital operations was a "sure thing", and their way was the only way!

2) Secondly, I'm told that the technical aspects of HF Packet radio, as allowed under the STA, did not prove that single frequency, single connect, message handling was much more effective than 74 baud (100 WPM) RTTY at times. And, that to exploit the packet protocol and allow multiple connects on a single frequency caused such system degradation that data throughput almost ground to a halt. What would the consequences of an unlimited number of automatic, unattended HF Packet stations have been on our already limited digital frequency allocations? How does HF Packet compare in data throughput with AMTOR, considering baud rate, packet size, retries, etc. And, with new high-speed systems such as CLOVER II, PACTOR, etc., coming on line, the performance of HF Packet comes under even more difficult scrutiny.

3) Third, granting exclusive use to a frequency or set of frequencies to a small group of users goes against one of Amateur Radios most stalwart traditions, namely that everyone competes for frequency use not by gaining any special permission, but by occupancy alone.

Who would approve which stations were blessed with permission to run unattended BBS operation?

Would piecemeal authorizations of this type set unfavorable precedents?

And, in this day of strict budgetary restraints, who would enforce such an arrangement?

4) Fourth and finally, one must also ask what has happened to the folks who prior to the STA, utilized the area between 14100 and 14115 KHz. It appears to this author that the STA has been utilized to surreptitiously expand the area above the so-called Gentlemen's Agreement, (14100 KHz), without regard for those who for years used this area routinely. As a digital enthusiast myself, I certainly see the need for additional spectrum for these types of communications on 20 meters, and in fact I have in the past suggested that the Gentlemen's Agreement be expanded. However, my comments speak to the issue of why HF Packet has been regarded with such disdain, and its uncontrolled spread above 14100 KHz most likely has offended many.

Having almost painted myself in a corner, and hearing the ammunition being chambered in many a rifle, let me state unequivocally that I support HF high-speed digital radio networking 100 percent! Not only do I think that networking is the life blood of any well designed message system or data base, but I further think that there's a place for it in both the HF and VHF/UHF amateur radio spectrum. It's just that I do not personally feel that HF Packet radio is the best mode of choice, especially as it was approved under the FCC STA. It is neither fast enough, nor is it sophisticated enough to deserve special frequency authorizations. We need further experimentation with new modes, new ways of controlling and monitoring semi-automatic and even fully automatic systems.

The passion of the moment probably does more harm to Amateur Radio than the reality of the loss of the STA. It's easy to place "blame", but it's hard to be constructive. I think that we need much further investigation into the whole question of our utilization of allocated digital frequencies, the current and projected digital modes, what drives and motivates SYSOPs and users, and quite importantly, determine what the FCC sees as its role in allowing free interchange of digital information within Amateur Radio.

For example, one new digital mode has some very appealing features. It will have a frequency bandwidth of approximately 500 Hz, (at the -50 db point), one-fourth that of a current RTTY/AMTOR/HF Packet signal. It will utilize some very sophisticated error correction techniques, that provides for error correction WITHOUT requiring that the data packet be retransmitted. Data throughput in this system is very impressive, being approximately 10 times faster than AMTOR/HF Packet, utilizing sophisticated adaptive transmission techniques to account for varying ionospheric conditions. If this digital system performs in real life as it is presently being billed, relaying of digital traffic/messages under semi-automatic conditions becomes more attractive, and under fully automatic conditions a real leap in magnitude. Yes, I know that semi-automatic still means that a human being must be present at one end of the link, but

the dramatic increase in data rate means much less transmission time, less frequency utilization by any one station, and if the current ARRL position would be approved by the FCC, at least the backbone of a high-speed digital data network. In light of the cancellation of the STA, we may have to learn to crawl before we learn to walk, in relation to proving our abilities to responsibly utilize our digital authorizations, no matter whether under semi or fully automatic control.

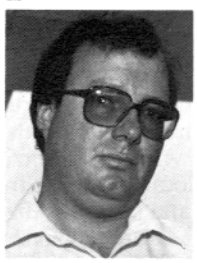
Is it better to have approval for semi-automatic control of digital stations, than *have no authorization at all?* I fully understand the tremendous advantage of fully automatic control of any networking system. However, at this very moment that appears as one option we will not have. I suggest that we have many years of experience already under our belts in the "semi-automatic" control area, specifically the varied operations of MSOs, (Message Storage Operations), APLINK (AMTOR/PACKET Link), PAMS (Personal AMTOR Message System), and other CBMS (computer based message systems). Why don't we draw upon the experience gained in operating these systems and utilize it, along with some of the new digital modes, to institute a intra- and inter-continental digital system, with the thought of gaining approval for fully automatic service in the future.

Personally, I would not object to designating a three kilohertz (3 KHz) area above 14100 KHz where unattended, fully automatic, high-speed digital communications could take place. An "open" area, where any and all could communicate with others so inclined to provide this service, employing the latest in receiver selectivity features, narrow bandwidth transmission techniques, etc. On the National Autostart Frequency, we have over the past 12 years shared this frequency (14 085 625 Hz) with as many as a dozen automated MSO RTTY stations. We have, in essence, utilized the current definition of "semi-automatic" control quite effectively. Sure, there's times when we step on each others toes, but it's usually caused by ionospheric conditions, rather than operator error. Considering that the data rate of the newer modes will be ten times that of AMTOR (100 baud), think of the quantity of traffic that could be passed by six systems occupying that 3 KHz of spectrum, passing traffic at more than ten times the rate of 74 baud RTTY! It would undoubtedly take some scheduling, cooperation and heartfelt desire to provide high-speed services by all concerned, but the experience gained utilizing these new modes might be the lever we need with the FCC to gain approval for unattended, fully automatic services in the future.

Finally, I don't have any corner on intelligence, my crystal ball is just as cloudy as the average one, and I don't claim to be any kind of expert in these matters. But, I do feel that unless we work together with the intent to move forward in these exciting technological areas, we will miss the opportunity to demonstrate our real usefulness to those who provide us with spectrum to utilize. We can either take a step backwards and complain about the ARRL, the Digital Committee, the FCC, etc., or we can accept that, for whatever reason, the STA is not going to be extended, and that we need to move on towards new and exciting horizons.

My ramblings above may not hold up under close scrutiny, but there are those of you more involved in the day-to-day operations of sophisticated digital systems who can rationally explore and design new systems that may gain unattended, automatic approval. Let's pull together, with that goal in mind.

73, good luck....de **Dick, K0VKH** ■



HARDWARE

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

Received a lot of mail from Europe this past month. OZ7GI writes about problems he is having with software and contesting. Jorn and I also had a nice chat one evening on RTTY. Hopefully, Hal, WA7EGA, has sent him some info to help solve his problems. Bob, KE8DM, sent a nice account of his activities working on his tower out there in the High Desert, 118 degrees F, whew.

Hal, WA7EGA had to cancel out at the last moment in the SARTG so sorry that we weren't able to operate more. See all of you for CQWW RTTY and in the DX pileups.

Received the following note from Tapani, OH2LU, via APLINK. He relates:

"I read with interest your comments on KAM and HostMaster II+. I ordered both upgrades as soon as they were available, so they must be of April production. I had the previous versions also in use since Summer 1991.

The KAM 5.0 and HM2PLUS do perform more reliably than the previous versions, with which I had unexplained lock-ups every now and then. I suspected all kinds of environment problems, like RFI etc. that I had not experienced with other simpler terminal programs, but NIL anymore. I also use it on an old Laptop with an 8088 processor and works very well.

The beeps can be eliminated by running the Hostset utility. However, if I change the windows-parameters for some reason I do receive the beeps from HF garbage. My normal settings are no packet monitoring window in order to have the max. windows for DX-Cluster on VHF and HF contacts.

The Autobaud question shows up sometimes, if I have used some other terminal program, but most of the time the question is eliminated by having the KAM turned on BEFORE starting the HM2PLUS. Recently I have run extensive tests under OS/2 2.0 and the combination runs like a charm."

de Tapani, OH2LU, at OH2BAW.FIN.EU (APlink)

AEA IsoLoop Antenna

This device recently arrived and I have started putting it together in preparation for testing. Very nice package from the folks at AEA and it looks like an interesting piece of gear. A full report will be forthcoming in a future issue. Briefly, it covers from 10 to 30 Mhz. The IsoLoop is just that, a compact loop antenna. Efficiency is the name of the game with small loops and this one has a claim of around 75% or better on most of its frequencies. I plan to give it a couple of tests. First will be on 10 Mhz Packet, then onto 14 Mhz Amtor, and then a look at the other WARC bands. Since 10 MHz is pretty much gone here in the Pacific Northwest we will probably stop the tests a little shy of there.

Bob, N7KJE, the local VHF club president had a very favorable experience with the IsoLoop during Field Day and operated from the top of a forest service lookout post in Northern Idaho. You might have caught him on national television as there was a report done on lookouts that weekend.

I plan to have the IsoLoop mounted on the back deck about 15 feet off the ground and not even visible from the street. Of particular interest will be the rejection of

other signals (intermod and also TVI rejection).

The IsoLoop is in the $350 class and is for 150 watts or less. VSWR is less than 1.5 : 1 typically and it's 43 inches in diameter. Mike Lamb, N7ML, of AEA has demonstrated this antenna to me and he was the one instrumental in getting me to take a look at it. I remain skeptical and have heard a number of things that will be included in the test. Of particular note will be the change of tuning to temperature on a given frequency over a period of time. Stay tuned.

PacComm Tiny-2 Node

I now have in my posession a Tiny-2 Node from PacComm[1] that I ordered. Still no sight of the 440 gear. I now wonder about the disaster down in Florida and how equipment deliveries from that area will be effected. I doubt that I get a chance at the 440 stuff until later in the year.

The Tiny-2 is in a nice extruded aluminum case and is about 5 inches by 7 inches. The folks at PacComm also have a full line of NetWork ready devices and that's the one I ordered. (The Tiny-2 Node at 10 Mhz.) It features a 10 Mhz CPU, SIO, and fast RAM. Price class $145. It comes without the standard ROM but with a blank high speed ROM for writing of your favorite "The Net" or such ROM instructions. It allows data rates of up to 38.4 KBps for efficient communications between units in a node stack. The Tiny-2 Node worked flawlessly. No traces to cut, no modifications, no hassles. Plugged in WS7I-7 and DX-1 and it was up and running a few minutes later. Same pin out on the DIN plug as the other series of TNCs and I didn't even have to make a cable.

Hope to be able to relate some further information to you on the PacComm line as it arrives.

KAGOLD DUALPORT -- DIGITAL MODE SOFTWARE

Nw features in latest release expand functionality

KaGold is a fairly recent addition to the host mode software offerings that are available for the Kantronics KAM Multimode controller. This software has been used in my shack off and on for a number of months. It was first reviewed by me during the Dayton Hamvention when KaGold was chosen, along with a number of other products to highlight my speech during the 1992 Digital Forum. The latest version of KaGold is version 7.25 released in August 1992. The software is available for compatible PCs using DOS and requires a set of the latest Kantronics ROMs (Read Only Memories).

Interflex the Company

KaGold is one of the products of Interflex Systems Design at Post Office Box 6418, Laguna Niguel, CA 92607-6418. Their telephone is 714.496.6639 and FAX is 714.496.8041. Support BBS at 714.497.5860. The price class of KaGold is $ 79. They offer updates and support on the BBS and periodic updates via mail. A full service question and answer forum is available on their BBS. KaGold was seen on display at the Ham Radio Outlet store near Portland, Oregon and is available also from A.E.S. or direct from InterFlex.

The folks at Interflex, Jeff Towle WA4EGT, and Lynn Taylor WB6UUT are really quite involved in host mode software design. They approach software from a fairly unique angle and it is a little different and very powerful. Intuitive is the word.

Kantronics KAM -- Multi-mode Controller

One of the primary things to remember when thinking about software on the Kantronics KAM is that the KAM does things on two ports at virtually the same time. What happens is that this has the potential to cause certain problems for the user or the software designer. No where can this be demonstrated easier than in the timing for turning on and off the transmitter.

Usually transmitter control seems pretty straight forward. You give an instruction to the computer and the computer gives the same instruction to the "on board" computer in the multi-mode controller. This is part of the power of the "host mode." But let's think along a different approach. What if the device is receiving on the other channel and is actually acknowledging say a packet on the VHF port while you tell it to stop transmitting on the other port. Control is now a lot more difficult, because you must actually share the computer. So the software programmer builds in some delays. It is a clear trade-off from positive control to intelligent control and needs to be taken under consideration when looking at software on the Kantronics KAM. InterFlex gives you the option of both methods of transmitter control in KaGold.

FEATURES:

Intuitive and versatile are the bywords of this software. This is unlike, almost every other implementation by other authors which I have reviewed over the last several years. What you want to do is usually what is already being done for you with KaGold, sometimes without you even thinking about it. One example is the "lockup." All software, except TheGold's are often, if not nearly always, in a state of lock. The example I use is a contest program written for the PK232. It runs in non-host mode and is setup at 4800 baud on Port 1 at 8N1 (eight bit, no parity, 1 stop bit). If you have just used it and pick up one of the Host Mode programs, usually you get instant lock. Just the other day another PK232 user was on the local 440 machine complaining about how he couldn't get the PK232 to work. "Stop by", said I. He did, and I fired up the PkGold test drive software that had recently arrived. Voile! All of a sudden it started working! No matter where or how you leave your Multi-mode controller, Interflex and the powerful Gold Host Mode applications can find it.

KaGold sets some standards

There are so many features that are contained in this program that I am only going to comment on some that I particularly liked. Multi-level conference is built-in. Network support for node hopping is an outstanding feature and used on packet. File transfers are very impressive, and although not used a great deal in my particular part of the country, are indeed one of the strongest parts of KaGold. In the Great Specific NorthWest we just use the telephone because there aren't a lot of hams who live in close proximity, like so many other areas. KaGold will support FBB transfers a subset of YAPP.

Editing and Clipping

Editing and clipboards work so well you can move data better than any other software I have used, which includes a bunch of telephone BBS programs. Data is collected as it comes in and you don't have to do a thing. When you want to look something up you just tap a couple of keys and its there. This has solved for me one of the major problems of my digital career. I never remember to turn capture things on. With KaGold they are on automatically. Size is so large as to be unlimited. Simply huge! In case you missed part of the discussion on the HF Packet Automatic control debate that has been roaring around the bands, I probably have captured it. I read messages, one after another, and when something struck my interest I moved it to the clipboard, to the printer, and then to file.

Watching and Exchanging

KaGold can be set up to watch for a callsign. KaGold automatically exchanges name, QTH, and QSL information on connecting to another Gold station. I managed only to find a couple, but they are growing in leaps and bounds. Morse announcements are fun and at 40 WPM tend to impress the on-CW hams. Timing un-

der Windows causes lots of interesting things with CW, a Microsoft problem not an Interflex problem, so its best to probably turn it off while using Windows.

Special support

Here, as in a lot of other places, the KaGold program shines: MARS support of virtually any type of EOL (end of line) sequences, special line formatting, ROSE switch support, KaNode automatic routing and a lot of Ka dual port support. The latter in particular is becoming very popular around the country. KaGold supports the "X" connects. Last, but not least, the program supports the 16550 serial chip. This is important because the 16550 uses FIFO (first in first out) buffers and makes serial data flow become vastly improved. You will see many if not all serial communications going in this direction in the next few years. I have a 16550 and it works much better that the normal serial chips. You can purchase one and usually just plug it in as a direct replacement.

The Actual Test

Features have been discussed, functions pointed out, keys learned and now we come to the most important part -- the TEST. Since I received my KAM back from Kantronics after the great crash test at Dayton, I have been using this program and virtually no others. So it has been a number of months now. Having used the PktGold version on the PK232 I was a little familiar with the process, but not with the results. To really use software of this caliber you have to be doing many things at once. It is kind of eerie how well the mix of screens functions. Previously when I was attempting multi-connects I couldn't really appreciate how well things worked. Now with both channels going (HF and VHF) and lots of time to spend testing it can be appreciated. Copying of a QSL route from RTTY to the PacketCluster is a breeze. Just take what it automatically captures and circle it and put it on the clipboard and send it on its way to the other port. Slick.

There are still many things to be learned and I plan to keep this piece of software in active use. In fact I am looking forward to putting some more mileage on the KAM. Problems? Yes, there are some. Things that I would do differently, things that I will request. Reports from some of my readers about problems with RTTY pictures, Windows and CW. However, raw capture and raw send should solve the RTTY picture problem. A very few "bugs" remain (Interflex loves to call them un-documented features). They are however, in this version, few and far between. I did find one and It is fixed.

Let me give you an example of a few things I don't like just to show how problem free the software is in most areas. The clock on the screen is terribly formatted. It reminds me of a certain Actuary who never puts commas in numbers like 1000000 dollars (which in case you can't tell is a million 1,000,000 bucks). KaGold's clock reads 140023 with the last two digits in constant motion. A clock should read 14:00.23. Gosh, I hope it wasn't in the setup area! Well, after I wrote this I had to check. Yes, in the setup you can pick between several formats for the clock.

There are so many neat little things that it takes days or even weeks to get a good feel. Showing the connect path is an outstanding little feature. I frequently run over to Wyoming (about 1,600 miles) on the VHF packet circuits and talk with the PacketCluster guys there. It is nice to be able to trace the path and then setup a "quick connect" path to be repeated. A few of the old habits are hard to break. I thought it was sort of strange that the name stuff didn't seem to work on packet. Well the quick connect is actually great with the identification in CW, but the connection needs to either be a quick connect, so it IDs the stations along the way, or a direct connection. If you stop at each node and do a manual connect to the next it doesn't know to whom you are connected. I simply never do a manual connect from node-to-node any longer. It is great to fire up a "quick" and just sit back and listen to the CW ids as it does the work.

Documentation

Another fine feature of KaGold is that it comes with both on-line and printed documentation. The package's hefty user manual has a limited index, but an expanded Table of Contents. Things are easy to find. It's a great little manual which now covers the Gold series of software all in 90 page book. The manual is small and fits on the desk and in the hand. On-line help is available for KaGold and includes a great deal of useful information on tools, uses, and even background information on the modes. Documentation is good.

Support and Value

If your multi-mode is the Kantronics then part of your software ought to be KaGold. It is simply that good. Support by Interflex in my experience is excellent. Like many programmers they have some ideas and methods that not all users will agree with. I actually enjoy talking with them on the phone -- and the bill reflects it. The BBS idea of support is excellent. KaGold is a protected piece of software. Not from copying but from using. It is a good scheme that protects the software authors and permits the users full access. Dual port devices have some limitations to accomplish doing nearly two simultaneous tasks. I am not sure that contesting with this type of software is possible but if it is expect to see it in this package.

73 de Jay

WS7I@WS7I.WA.USA.NA

1. PacCom, 4413 N. Hesperides st. Tampa, FL 33614-7618

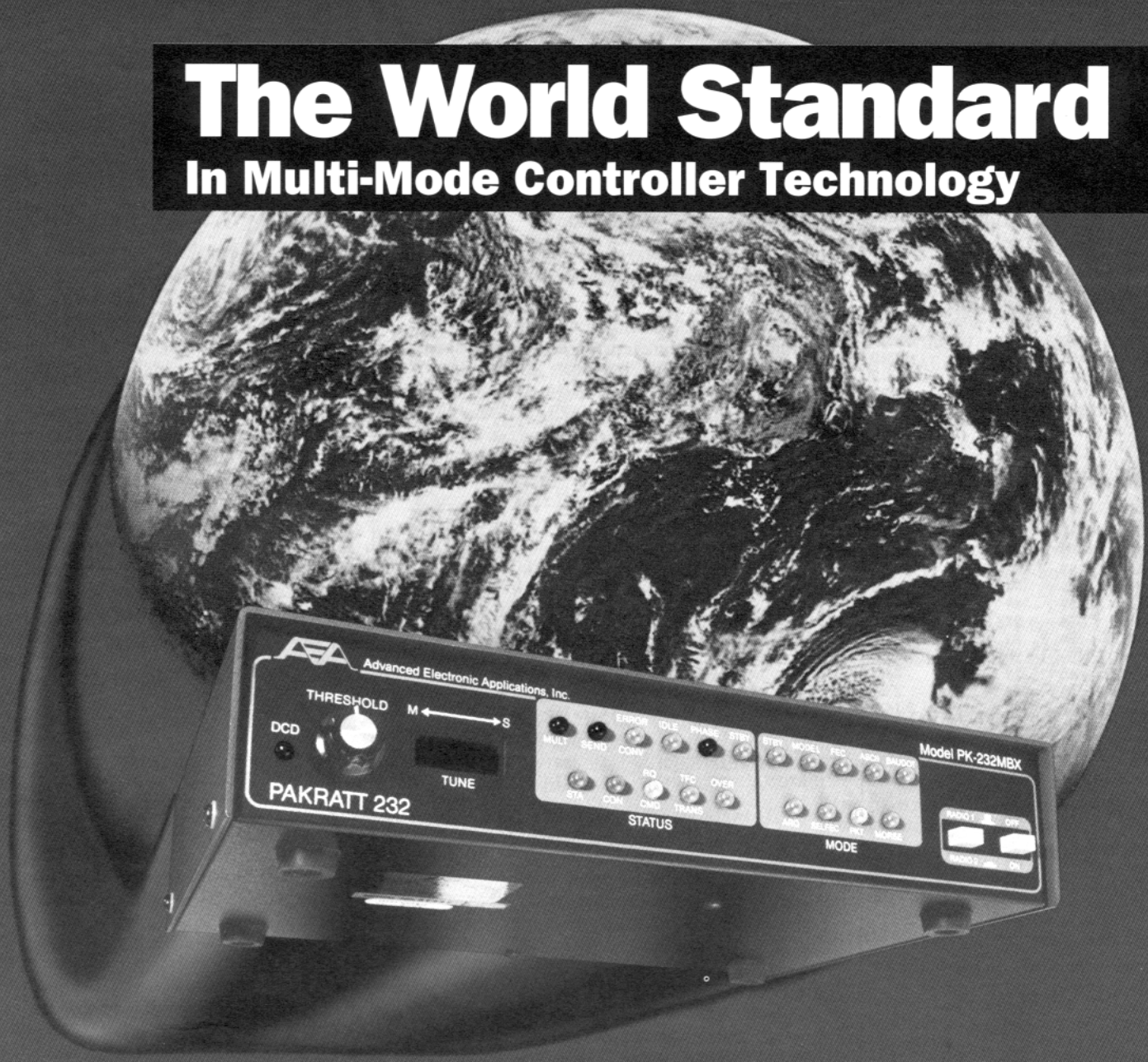
SIDEBAR

Part of the learning curve on KaGold is learning the dual functionality of Function Keys. After you do its like magic.

F1	Help
F2	Net View/Band
F3	Previous Session
F4	Next Session
F5	Clipboard
F6	File Transfer
F7	Connect's
F8	Path
F9	Search
F10	Parameters
Alt-F1	Conference
Alt-F2	Mheard
Alt-F3	Terminal
Alt-F4	Dos Shell
Alt-F6	Brag
Alt-F7	Disconnect
Alt-F8	MailDrop
Alt-F9	Search Again
Alt-C	Call
Alt-D	Date
Alt-E	Qsl Info
Alt-F	Frequency
Alt-I	Call Lookup
Alt-N	Name
Alt-O	Status
Alt-P	Print
Alt-L	Hide/UnHide
Alt-Q	Qth *
Alt-S	Setup Menu
Alt-T	Time
Alt-U	Cq Unproto
Alt-Z	Zoom Menu
Alt-0-9	Messages
Alt-[-]	View Alt-n
Esc	Send/Recv
Ctrl	Mode Switch

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.

Advanced Electronic Applications, Inc.
P.O. Box C2160/2006 196th St. S.W. Lynnwood, WA 98036-0918
Customer Service (206)775-7373 Upgrade Hot Line (206)774-1722 Catalog Request Line (800)432-8873
CompuServe user ID76702,1013

1992 EA RTTY CONTEST RESULTS

Non EA Stations

CLASS A
Single Operator Multi-band

CALL	QSO's	PTS	MLT	TOT
UH8EA	295	806	115	92690
4M5RY	278	600	104	62400
I2HEO	200	372	103	38316
SP3SUN	163	315	116	36540
CT1AUR	211	339	103	34917
OH2LU	144	253	98	24794
HA8EK	104	313	77	24101
OK3RJB	101	197	72	14184
IK0REP	97	159	76	12084
AA5AU	87	150	65	9750
HK1LAQ	97	194	48	9312
F6CAX	65	160	51	8160
IK0CNA	86	136	58	7888
N6GG	98	133	47	6251
W8PBX	60	122	40	4880
Y26GA	51	106	46	4876
G3NUE	55	104	46	4784
KI4MI	53	89	45	4005
W1BYH	58	97	37	3589
YO6JN	58	82	43	3526
IK5MEQ	55	90	39	3510
WA8FLF	48	79	36	2844
CT1CKP	55	64	40	2560
KL7JF/4	58	65	25	1625
IK2PZF	39	45	30	1350
SM4CMG	36	48	28	1344
SP7FQI	24	36	22	792
OH2GI	27	24	27	648
IV3ZDO	25	29	20	580
LA5RBA	24	33	17	561
DF5BX	20	22	22	550
SM7BGE	25	25	20	500
K2PF	15	30	16	480
DK5KJ	14	18	12	216

CLASS B:
Single Operator - Single Band

YU3HR	158	237	55	13035
YB2OK	57	324	30	9720
IV3FSG	101	149	45	6407
OK2BXW	127	127	43	5461
DL9MBZ	73	84	43	3612
SP9BCH	50	62	33	2046
YU3BQ	28	90	21	1890
OK1DJO	40	53	29	1537
VK3EBP	34	62	23	1462
IK4BZR	33	40	23	920
SP2UUU	17	18	16	288
UA0FDX	6	9	8	72
LZ2JG	7	7	7	49
VK2EG	1	2	1	2
WK3S/WHO	1	2	1	2

CLASS C
Mulit Operator - Multi Band

UZ9CWA	299	742	144	106848
LZ2KIM	314	545	130	70850
OE1ZJA	51	79	43	3397
HA6KVD	51	76	44	3344

CLASS D: SWL

ONL383	188	365	118	43070
I1-21171	119	238	96	22848
G6LAU	113	217	88	19096
G8CDW	103	177	86	15222
I71237-BA	66	74	49	3626

EA STATIONS

CLASS A
Single Operator - Multiband

CALL	QSO's	PTS	Z	CTY	MLT	TOT
EA6ZP	211	302	33	71	104	31408
EA1JO	126	214	33	54	87	18618
EA7CVL	116	171	30	57	87	14877
EA5FEL	96	142	24	38	62	8804
EA7BR	64	106	24	36	60	6368
EA7MA	57	100	22	37	59	5900
EA7DRK	76	111	17	34	51	5661
EA7GXX	58	84	21	28	49	4116
EA5YR	78	87	15	27	42	3654
EA1ZL	61	82	15	23	38	3116
EA1GO	51	48	11	22	33	1584
EA1AHA	35	35	13	23	36	1260
EC1CYG	19	23	9	13	24	525
EA1EUI	28	27	5	13	18	486
EA5AEB	25	27	6	11	17	459

CLASS B
Multi-Operator - Single Band

EA3GCJ	85	104	8	23	31	3224
EC1CTH	51	79	12	17	29	2291
EA1EVY	61	65	8	21	29	1885
EA7DTZ	44	51	6	16	22	1122
EA1DVY	21	21	4	10	14	294
EA7CWA	16	17	5	11	16	272

CLASS D: SWL

URE 1117 B	86	119	25	43	68	8092

CHECK LISTS
EA1AVN, EA1PJ, EA1MV, EA1VZ, EC1CWF, EA2NO

WINNERS

CLASS A:

NON-EA STATIONS

UH8EA	Gold Medal + Cert.	
4M5RY	Silver Medal + Cert.	
I2HEO	Bronze Medal + Cert.	
SP3SUN	Cert. winner	SP
CT1AUR	" "	CT
OH2LU,	" "	OH
HA8EK	" "	HA
OK3RJB	" "	OK
IK0REP	" "	I
AA5AU	" "	W
HK1LAQ	" "	KH
F6CAX	" "	F
Y26GA	" "	DL
G3NUE	" "	G
YO6JN	" "	YO

CLASS B:

YU3HR	Cert. winner	YU
YB2OK	" "	YB
IV3FSG	" "	I
OK2BXW	" "	OK
DL9MBZ	" "	DL
SP9BCH	" "	SP

CLASS C:

UZ9CWA	" "	UZ
LZ2KIM	" "	LZ
OE1XJA	" "	OE
HA6KVD	" "	HA

CLASS D:

ONL383	" "	ON
I1-21171	" "	I
G6LAU	" "	G

EA STATION WINNERS

CLASS A:

EA6ZP	Gold Medal + Cert.	
EA1JO	Silver Medal + Cert.	
EA7CVL	Bronze Medal + Cert.	
EA5FEL	Cert. winner	Dist. 5
EA7BR	" "	7
EA1ZL	" "	1

CLASS B:

EA3GCJ	" "	3

CLASS D:

URE 117 B	Cert. winner

THE LINK

Jim Jennings, KE5HE
Rt. 2, Box 165E
Hearne, TX 77859

As I write this column I am at our cabin in the mountains of southern Wyoming. We just finished a breakfast of pancakes made with wild huckleberries the kids picked yesterday. Boy were they good! We have a generator here so from time to time I can power up the rig and maintain contact with AMTOR friends and also offer to do my part with the emergency traffic from Hurricane Andrew. This year I installed a R7 antenna to supplement the 80 meter dipole hoping to work Abdul, 9K2DZ. Abdul has worked all states RTTY except for Wyoming. Propagation conditions have not been too good, but maybe we can make a contact before I leave in mid September.

SOME MODS FOR THE PK-232

I recently completed the mod for the PK-232 suggested by AEA to enhance the operation of the input filters for RTTY and AMTOR. As a result, you loose PACKET and ASCII capability on HF. If you are a serious AMTOR operator, I suggest that you make the modification as the result is a controller that hears as good as any of them. What is required is to replace R42, R52, R62, and R72 with 432K 1% 1/4 watt resistors. What I did was to simply lift one end of the original resistors and tack soldered the new ones in place. The resistors and replacement of the original ones are available from AEA free of charge. Simply ask for the AMTOR mod.

While you have the PK-232 apart and working on it you might as well make some other adjustments and modifications that also will help. The first is to check the setting of the 4.0 MHz crystal oscillator, Y1. I found that I could set that by using a counter or well calibrated receiver set at 4.0 MHz. You might have to clip a short lead (antenna) on pin 12 of U15 so that you can hear the oscillator with your receiver. Adjust the associated trimmer for zero beat at 4.0 MHz. I had to make this adjustment as I had put a new crystal in the circuit. Normally this oscillator should not have changed frequency.

Next, you should adjust the shift to the standard 170 Hz used by most RTTY and AMTOR stations. If you use FSK, the shift must be set in your transmitter, but you set the AFSK shift in the PK-232. Even if you use FSK make this adjustment as we will use the AFSK tones to set some of the filters in the unit. All you do is to bring the controller up using your favorite terminal program in the usual way. Then enter the CALibrate command. The unit will go into the calibrate mode. H will toggle the tone generator between wide (1000 Hz) and narrow (200 Hz) shift. You want the narrow shift. The space bar toggles between mark and space tones. When you get the HF space (approximately 2310 Hz), you will see R164 appear just to the right of the tone frequency on your screen. Adjust R164 until the read-out is 2295 Hz. In a similar fashion, adjust the HF mark (approximately 2110 Hz originally) to 2125 HZ. R168 is used to set the mark frequency.

After setting the tones to the standard 170 Hz shift, I then connect the PK-232 in the Loop-back mode as described in the manual. In the Loop-back mode, the output of the AFSK generator is fed back in to the receive filters. This is done by connecting pin 1 to pin 2 on J4 (flat radio connector). Again using the terminal program, bring the PK-232 up. Go into the HF mode by entering the command VHF OFF. Then enter the CAL command and select the HF mark tone of 2125 Hz. Adjust R81 for maximum AC voltage on pin 3 of J7. This is the scope output for the mark signal. Similarly select the HF space tone of 2295 and adjust R96 for maximum AC voltage on pin 5 of J7 (the scope output for the space signal). When you make these adjustments you can see precisely the LED that lights up with the mark and space tones. I put a little piece of masking tape just above the LED read-out and mark it with a good black line on each tone. This gives me a good reference for precise tuning when I use the unit.

Another mod that I made to the PK-232 some time ago was to put 1 MFD 35 volt tantalum capacitors between pins 4 and 11 on U23, U26, U28, U30, U32, and U34 (all 14 pin chips). Be sure to put the + side of the capacitor on pin 4 in each case. My controller is an older model. On the newer ones U28 is an 8 pin chip. Do not use the capacitor on U28 if you have a newer unit. These capacitors are said to help reduce the hash generated within the chips.

I hope you make these mods if you run much AMTOR, as I am sure you will be surprised at the improvement they make in the way the PK-232 hears.

SOME APLINK BASICS

It has been a little over a year since I started this column. I think it might be appropriate to revisit some of the APLINK basics for those of you that are just starting to get interested in APLINK.

The following is an excerpt of the "help" files from APLINK:

Logging In On AMTOR

This MBO has an automatic "login" procedure for registered stations with automatic answer back (AAB) enabled. When you first link with the system, it seizes the link, identifies, sends a 'WRU' character (figs-D), and waits for an answer back response.

The expected response is:

(CR/LF)QRA CALL SELCAL +?

or

(CR/LF)DE CALL SELCAL +?

For example: '(CR/LF)QRA WA8DRZ WDRZ +?' is a typical response.

If no AAB response is received the system sends a manual "login" request followed by the +? sequence. At this point a user should send either 'LOGIN (call)(CR/LF)' OR 'LOGON (call)(CR/LF)'. If the call has been registered the system will respond with a 'GA' prompt. If an error was received or the call is not registered the system will ask you to confirm the call. If you answer the confirmation request with 'YES' the call becomes registered.

APLINK will disconnect after three minutes if no "login" has been recognized.

Once you have logged on, the system is ready for your command whenever it sends a 'GA' (Go Ahead) prompt.

You may log out of the system with 'LOGOUT(CR/LF)' or 'LOGOFF(CR/LF)'. Any time the link is lost, the current user is automatically logged out.

If a message is being sent to the system during a link failure, that part of the message that was received is filed and is available to the addressee.

AMTOR Channel Commands

Type any of the following commands on a new line and end with either (CR/LF) or the +? sequence (but not both). If you do not use the +? sequence the system will change the direction of the link for you when it recognizes a valid command.

H or HELP - Send the help file

CNCN - Cancel whatever is in progress. (Usually a message you are entering into the system)

LOGIN (your call) - Logs you in.

LOGON (your call) - Same as LOGIN

L - List all available messages in the system, not including bulletins (see note)

L (number) - Same as above equal or greater than (number) (The L command may be disabled on some MBOs)

LTO or LM - List all messages to you.

LTO (call) - List all messages to (call).

LFM - List all messages from you.

LFM (call) - List all messages from (call).

LT - List all NTS messages.

LB - List all general interest bulletins (see note) LB (number) - As above equal or greater than (number).

LR - List users who have logged on in the past 24 hours.

NTS - List all unforwarded NTS messages.

RN or RM - Read all new messages addressed to you R (number) - Read message (number) RH (number) - Read message (number) including routing headers.

SP (call) - Send a message to (call), end with NNNN

SB (name) - Enter a bulletin with (name), end with NNNN

SB (name) AT (route) BID (bid) - Enter a bulletin with (name) at (route) with a bid of (bid)

SP (call) AT (route) - Send a message to (call) to be forwarded via (route)

ST (zipcode) AT (NTS statecode) - Send an NTS message (use accepted NTS subject and message format)

NNNN - End a message. Must have been started with SP, SB, or ST.

CANCEL (number) - Cancels message (number) if originated by you

T - Talk to the sysop

I - Information about this system

V - Read version number

A - (After seizing the link) Abort a file being received

LOGOUT - Logs you off LOGOFF - Same as LOGOUT

/// - Anywhere on the line cancels the line (except in messages)

Note: The L, and LB commands will only list messages you have not previously listed. Follow the command with a number to override this feature. Use 0 to list all messages in the category.

Here are some special commands for the Expert user:

EXPERT ON - Turns ON the 'EXPERT' mode

EXPERT OFF - Turns OFF the 'EXPERT' mode

ASCII ON - Turns the full ascii character set mode ON. Do not use this command unless your system is compatible with the full ascii protocol.

ASCII OFF - Turns the full ascii character set mode OFF.

F - (After seizing the link) Abort a file being received and mark it forwarded if it is for you. (This is for use with duplicate messages.)

Using the ASCII character set on APLINK

In order to use the full ASCII features of APLINK/PAMS, you must be running either APLINK or PAMS software and have either the PK-232, AMT-1, or HAL PCI-3000. In addition, you will need the following ROMs: In the PK-232, July 1991 or later, the AMT-1, version 07A or later, and the PCI-3000, version 1.7C or later.

Thats it for this month. Happy chirping!

73 AND GOD BLESS de **JIM, KE5HE** AT KE5HE.TX.USA.NA

PACKET

Richard Polivka, N6NKO
5800 South St. #221
Lakewood, CA 90713

THOUGHTS

Over the past several months, there have been many flames circulated over the packet networks concerning the work that is being performed by the ARRL Digital Committee and the subsequent recommendations that have been put forth by the Committee. The general attitude of the flames is to attack the Committee as being a bunch of RTTY people with an axe to grind on the packet community. That is so far from the truth it is pathetic. There is only one very active RTTY operator on the Committee and that is that. The rest of the committee members participate in all modes. They have no axe to grind on anyone.

Some of the comments that have been floating around border on the ridiculous and down right funny. The one that has me laughing the most is where several vocal people have said that they will pull their services from packet and let the forwarding network die. To them, I would like to know if they are operating an automatic, unattended station on HF, and if so, are they one of the approximately 140 operators that are authorized under the SkipNet STA to operate in this fashion? If you are not one of the chosen few, then what would the FCC think if they found out that you have been running an illegal operation? If anyone wants to pull their packet services for message forwarding off the air, it is fine with me. Their collective actions bear striking similarity to a young kid taking his ball away from friends that he has been playing with because the rest of the group would not abide by his rules. To these people, I implore you, make good on your threat and pull your station from the packet frequencies on HF. It will not bother me or anyone else. We, as amateurs, have prided ourselves with being able to get the traffic thru by what ever means possible. The loss of the packet stations will not affect the flow much. What will happen is the Aplink group will take up the slack and pass the traffic.

Unattended, automatic packet forwarding has NEVER been a right. This whole thing has been a test that went on far too long. I have always stated that packet over HF is a losing cause because you can't send information that requires perfect transcript in off the air when the HF airways are the worst medium to use. Packet protocol was designed for wires and light fibers and HF propagation is by no means the same, in terms of quality, as wires or light fibers.

To wit, this writer agrees with the ARRL Digital Committee's recommendation to support semi-automatic but not fully-automatic HF data transmission. Judging by the flood of @ALLUS messages flooding the nets, it appears that many hams have chosen to interpret this as an outright condemnation of HF packet by the digital Committee. This is certainly not their intention but it must also be considered that there are other and probably better ways to send data on HF radio. Amtor is one way, and another about to reach the market is Clover-II.

SPECTRAL THOUGHTS

No, I am not talking about some New Age philosophy. HAL Communications has published a spectrum analysis chart of the three most prevalent modes of digital operation. The Y axis covers the range of 0 db to -60 db and the X axis covers the range of pl us or minus 1000 Hz from center frequency. For this discussion, I will be giving you information based on the chart and from engineering theory applied to the chart.

There is an obscure term that is used to describe the steepness of the skirts of a filter. This term is called "shape Factor". The value is based on a ratio of two frequencies at two points of attenuation. The points used are at 6db below and 60db below the peak of the filter passband or stopband, depending on what kind of filter it is. As an example, at 250 Hz, the signal is down at -6db and at 500 Hz, the signal is at -60db. Given those values, the shape factor is 500/250 or equal to 2. The smaller the number, the better the shape factor.

According to the chart, I can't give you a shape factor for the HF packet spectrum because the sidebands are only about -44 db +/- 1000 Hz away from center frequency. AMTOR has a shape factor of about 10 to 1. Clover-II has a shape factor of 5 to 1. Even those values lie. At +/- 300 Hz from center frequency, the Clover-II signal is already -54 db down from the center frequency while AMTOR is at -36 db down and packet is only at -18 down. Now who ever said packet does not take up 2 K Hz of bandwidth, please stand up. Using the chart, one finds that packet eats up more than 2 KHz of spectrum. Clover-II, on the other hand, is tight. You can place two Clover-II signals right next to each other and not much will happen. You can't space packet transmissions that close or nothing will get through. Here again, the situation can be aided by the use of filtering. While you can use a 500 Hz filter to receive Clover-II, packet would sound like noise.

What I have found to be interesting is that not many people mention the "hidden terminal" problem on HF packet. The situation exists and can be more aggravating due to the varying skip found on HF. For some time I have said that packet should not be on HF in an unattended mode because of the above reasons and more. It appears that the digital committee has seen through the veil of obtuse verbiage and voted correctly, in my opinion, as a user and engineer. Hopefully, this situation can now be buried once and for all, amen.

FINALLY

My system has now moved into the big time! I have finally loaded up UNIX System 5 Release 3.2 on this piece of power eating silicon and motors. Yes, I love it. Aside from that, I took my old MFM controller out and replaced it with a ARLL controller. That took my venerable Maxtor XT1085's and boosted their formatted capacity from 68 MB each to 95 MB each. This system now runs at 1:1 interleave instead of 2:1, as before, and the data transfer rate is up from 250kb/sec to 640kb/sec. That is a nice. With UNIX here, I will now be able to run several programs at once, such as I am doing at this moment, typing this article while a program is compiling in the background.

One of the side benefits of running UNIX is that I will be able to run more than four Com ports on the machine. I have a card in the machine that has six ports and uses two I/O addresses and one interrupt for the whole thing. Considering how fast

interrupts get used up on a PC, this is a big help. I now can have two BBS programs running on the unit and be able to still use the machine for myself either at the keyboard or at a remote terminal. The investment has been worth it.

THE REVIEW

The following paragraphs concern a software package published and distributed by InterFlex Systems. When this software was initially released, it was released under the name of PktGOLD. The software that I will be reviewing is their PkGOLD package for the PK232, version 7.25. The program is a front end processor that communicates with the PK232 in Host mode. Host mode operation is where you talk to the machine in code and receive responses back in code. It is not as verbose as what one would see if the TNC was in normal mode, but Host mode allows for more control of the TNC.

From the start, the label on package says that I have available to me, conference mode, File Transfers, Expanded Log, Robot CQ, On-Screen Status, Screen blanker, Packet, AMTOR - FEC and ARQ, Navtex, Baudot, and CW. The disk arrived to me with a registration number on the disk label. The registration number is there as copy protection and as an identification to InterFlex Systems if there is a problem with your program. The program is distributed on a 360k 5 1/4' floppy in a compressed format. Before installing the program, or any program, make a backup and load from the backup. It is better to trash the copy than the original. Some programs have built-in counters that keep track of how many times a program has been loaded. If you screw up loading a program from of one of those disks, you may not be able to re-load it. Nasty, but that is the way it is.

Loading the software was quite easy. All I had to do was follow the directions on the screen placed there by the "install" program. During the install program run, a request was made to enter in my registration number. I did so with one change. I added "one" to the six digit number and it took. We will see if that makes a difference. More on the working of the program next month.

THE "BOOK"

One of my BIGGEST pet peeves is poorly or inadequately written documentation. If an engineer writes the Docs, they can end up being too technical and only techies will want to read it. On the other hand, if the Docs are not written by an engineer and written for the layman, there may not be a good balance of information needed. It is that delicate balance that is needed in the documentation to cover all of the bases.

The manual, as received, is a soft bound, 96 page manual. On the back cover is printed a quick reference for the commands to the program. The book is divided into eight chapters and two appendices. The introduction covers the basic data communication modes that are used by a TNC over the RS232 link. There is also a brief discussion involving the purchase of a TNC. The two paragraphs that explain about purchasing a TNC might cover more area in terms of buying a multi-mode vs. packet only unit.

The installation section mirrors the operation of the software loader. Each step is covered and explained succinctly. If the option has several choices, the choices are explained and if the solution requires a different setup, you are told where to g o within the manual and get the information.

The startup section explains how to get things going. It first covers the command line switches that are used when the program is started up. You can start by going to the "help", or "setup" menus by choosing the appropriate switch. Another good option available is being able to select a monochrome screen. This will help the image on laptops that use LCD screens. You also have the ability to select a configuration file for each TNC that you may wish to use.

A touchy subject with me on VHF is the setting of levels. Setting the receive level is a matter of preference in deference to your equipment. The transmit level, is another story. Personally, I would like to see everyone use a deviation meter to set the transmit level. Since emphasis is used on the transmitted signal, you would use the higher of the two tones to set deviation. I would personally use 3.5 KHz deviation. That allows enough headroom for the harmonics and doesn't slam the limiter. A limiter on digital signals is an absolute no-no. The book recommends that you adjust the transmit level of your station by comparing it to other stations levels on a separate receiver. That could cause a problem if the other stations you are hear are set wrong and are limiting their signals. The book saves itself by including a statement that the radio be set below the signals you are hearing. A method that I like to use is to set the TNC to send the high tone and adjust the transmit level from full level down until you notice the tone starting to decrease. Leave it there and that will suffice.

Another section also covers problems that you may encounter on startup. On a system, as complicated as mine, there can be many problems. The rest of this chapter defines the most likely ones to occur and the process to arrive at a solution to the presented problem. As with any program, there is an advisory on how to run the program under pseudo-multitaskers, such as Windows and Desqview. Running programs under these environments can be a hassle but the section helps smooth out the rough ride.

As with any program of this size and complexity, getting information when doing work can be frustrating, especially when you are in a rush to get something done and you can't find THAT BOOK! The program has a built-in "help" utility that is available by hitting one of the function keys. Within the "help" mode, the information is available in a "hypertext" format. Hypertext is a way of keying on several additional subjects from the original query. These additional subjects are reached by clicking on the highlighted word. Think of it like a visible index.

The rest of the manual covers the operation of the program and setting it up. I may be glossing this section over by saying this, but the operating sections cover the workings of the program quite well. There are many modes that are available to the user, as I have explained above and I will cover those next month.

NEXT MONTH

I will present the second part of the review dealing with the operation of the program. Along with that coverage, I will bring you a saga that is shaping up right now but I can't divulge what is happening until I receive further information.

Until then, keep your messages short and sweet, no flames please, because we all have to work together.....de N6NKO.

Callbook on Disk

A small company named j-Com now has the US callbook available on disk. The database program is called HamBase. It sells for $49.95 + $5.00 S/H. Being a publisher I have found this program very useful. It sure beats having to look in the book with a magnifying glass. HamBase comes up and asks for the callsign without having to go through any other motions or menus. Simply type in the callsign and Bingo, there is your address.

The program can be used directly from disk (10, I think) or from your hard drive which I chose. Screen editing is a snap and your data can be exported in ASCII format for use in other database programs. String selection is also supported. Need to print out labels for your QSL cards? No problem. The program supposts this feature also.

j-Com also has other optional supplements that cover Canadian callsigns. I am very satified with the program and still have not used all of its' features.

For more on HamBase, contact: j-Com, POB 194Y, Ben Lomond, CA 95005

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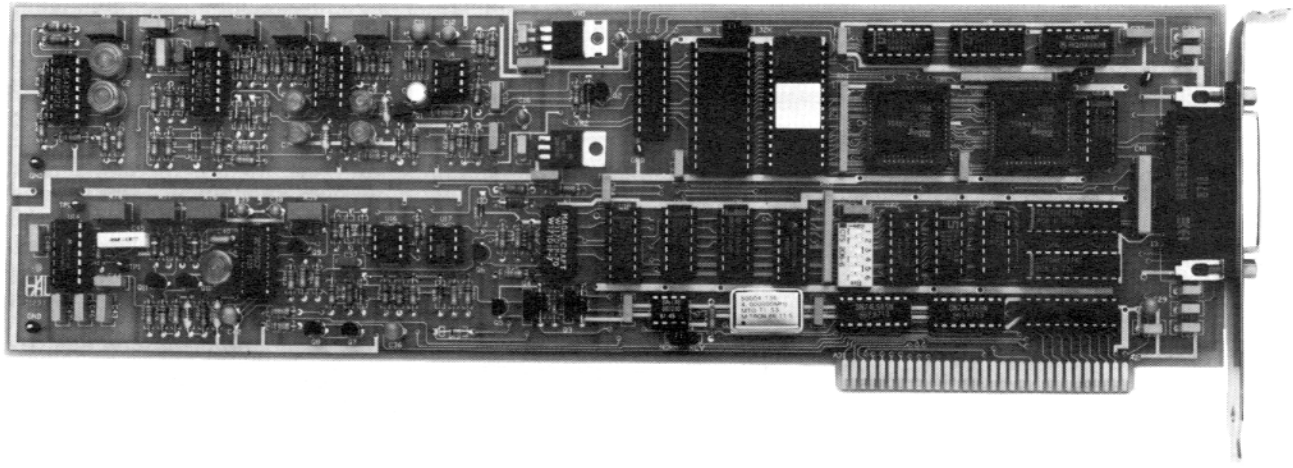
The PCI-3000 and SPT-2 from HAL!



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!

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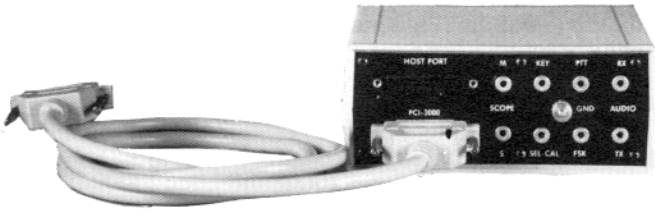

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PCI-3000/PC-AMTOR with software **$395.**
SPT-2 Spectra-Tune with cable **$169.**
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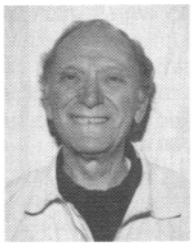
(Low tone export models available.)



DX NEWS

Jules Freundlich, W2JGR
825 Summit Ave., Apt. 1401
Minneapolis, MN 55403-3188

W2JGR BIOGRAPHICAL DATA

W2JGR has been continuously licensed since 1935. He has always been an avid DXer and made the DXCC Mixed Honor Roll 3 years ago. His position in the No. 1 spot awaits only receipt of his S2/HA5BUS QSL card. Current RTTY count is288/283. Jules is a former President of the Long Island DX Association,and was one of the founding members and a former President of the Long Island Chapter of the QCWA. He has operated from OH, VP2M, TG, HC, and 4U1UN. He currently operates a modest 100 watt station from a 15 story apartment house overlooking downtown Minneapolis. A 7 band Sommer Yagi antenna on a 40 foot tower on the roof keeps him competitive. Jules holds a Master's degree in Mechanical Engineering (1949) from Polytechnic University.He retired from the aerospace electronics industry four years ago where he had been a Program Director. Previously he had designed broad band microwave test equipment and labor saving automatic machinery. None of his three children ever took to ham radio, but one of his grandsons is OH2LKI.

John Troost, TG9VT, who has been your DX columnist since early 1989 is a tough act to follow. John created a new set of standards which will be difficult to emulate. First, if I may presume to speak for the RTTY/AMTOR community: Thanks John for keeping us informed and amused with the thorough treatment you always gave your subject matter. Our fervent wish is that you will be able to keep and improve your health so that we may continue to see on our screens "DE TG9VT DE TG9VT DE TG9VT....." for many years to come.

As you might expect, the first request I have of you, the readers of DX NEWS, is to send me your tidbits of forthcoming DX activities, interesting related experiences, little known facts, pictures, etc. that you would like to share with your fellow RTTY DXers. I cannot guarantee that we will be able to use it all, but when it is used, credit will be given, of course.

I can be reached directly by dropping mail into my PAMS, leaving a message at the Aplink boxes of TG9VT or CE3GDN, finding me on RTTY, telephoning me at (612) 377 7269 or Facing me at (612) 874 8161. When these high tech approaches fail, the U. S. Postal Service can find me. When I am not chasing DX my PAMS listens on 21074 during daylight hours in the Central Time Zone, 14074 at night. Set your chirping to WJGR.

DOINGS

ASIATIC RUSSIA, UA9 - Back in February 1991 I wrote that anyone wishing to make a RTTY schedule with UA9YE in Zone 18 could reach Yuri by packet radio addressed to UA9YE@RK3KP. Not surprisingly this route turned out to be anything but reliable. APlink has come to the rescue. You can now reach Yuri within 24 hours by sending him a message via APlink to UA9YE AT JA5TX. You will be pleasantly surprised at his prompt response.

ARUBA, P40 - Look for P40RY to make a mark in the CQ WW RTTY contest. This multiop group promises lots of action by AA5AU, N0FMR, W6/G0AZT, and KP2N.

BANGLADESH, S2 - This one will soon be as common as Albania! To my knowledge the earliest acceptable RTTY contacts are those made with S2/HA5BUS, the intrepid bus riders from Hungary now operating from VK-land. Cards received from W4FRU for the S2/WZ6C operation will probably only be good for covering that hole in the wall. It is understood however that Eric will soon have a legitimate license, having recently rejected one with a limited term.

CHATHAM, ZL7 - I don't know if they will still be there by the time you read this but, Ron, ZL1AMO, was to have been on this island for a week starting in mid-September. If you catch him, QSL to his CBA.

COCOS KEELING, VK9 - Karl, VK6XW, was scheduled to begin operating from here starting September 12 for two weeks. QSL to his home CBA.

DESECHEO, KP5 - The team of N0TG, KW2P, AA4VK, WA4DAN, and AA4NC, who did such a wonderful job from Navassa last January has promised it will fire up from this Caribbean island from 27 Dec 1992 to 4 Jan 1993. It will be an all band operation including WARC bands. Send your contribution to Randy N0TG.

EAST KIRIBATI, T32 - If you missed Bob, KN6J, operating as T32RA back in 1989 here is your chance to add this one to your DXCC tally. Bob and 6 others will be here for the CQ WW RTTY contest. Early arrival around September 22 is planned. In addition to Bob, listen for T32RS, T32GV, T32WS, T32CW, T32SS, and T32SG. This will be a Multi-Multi effort using the T32RA callsign during the contest. (See RTTY JOURNAL p.22 July/Aug. 1992)

GLORIOSO, FR/G, EUROPA, FR/E, JUAN DE NOVA, FR/J - Those of us who missed the brief recent operation from Glorioso will have a second chance when Jack, FR5ZU, operates RTTY there until the 20th of September. A chance for a first time new one will then appear as he moves to Juan de Nova on 21st September, and then to Europa on 5 October ending his tour of the islands on 16 October. Jack showed up as promised on 5 Sep on 20 Meters around 1300Z with a good long path signal into the states.

KERMADEC, ZL8 - This one was rumored (overheard on the air) to come up about the middle of September but no details are available.

MICRONESIA, V63 - If you caught any of the members of the Kenwood Radio Club of Japan at V63, QSL them to JG1EGG. Callsigns that were supposed to have been used between 10-14 September were V63AL, HN, HS, HY, KM, MI, MO, and TI.

SOUTH GEORGIA, VP8 - The gang from VP8SSI lit this place up on their way back home but relatively few contacts were made. Bird Island boasts of a population of 3, two of whom are active hams. Keith, VP8CKB, is quite active on RTTY, while John, VP8CGK, operates it occasionally.

Schedules can be made with them via the APlink system. They both regularly check into CE3GDN (CGDN) on 21074 Khz. Just drop a message there requesting a schedule and you can expect a reply within a few days. Propagation from that area tends to be somewhat unpredictable so propose primary and secondary time/frequency choices.

MISCELLANIA

KUDOS TO CARL, K6WZ - Congrats to Carl, K6WZ, for the beautiful color pictures of his home brew KW RTTY amplifier shown on the first page of UP FRONT IN QST in September 1991 QST. If it performs as well as it looks, watch out for some record breaking scores from Carl.

DXCC - Just as some of us thought we had reached the top in Mixed (there are other modes, you know!) mode, the world is in turmoil and several new countries will be added to the DXCC list shortly. At least two out of the Balkans

(YU), and for certain two out of Czechoslovakia (OK). Fallout from the former Soviet Union is still an unknown. As of the end of August the DX Advisory Committee (DXAC) was pondering some outstanding proposals. We should have some definite word by the next issue.

NCDXF BEACON UPGRADE - It is hard to believe but the Northern California DX Foundation beacon network has been operating for ten years on 14100 Khz. Now efforts are underway to expand the network's capability by transmitting on additional bands. W6WX/B has been experimentally transmitting on 21150 and 28200 Khz. using a computer controlled scanning program.

Planning is underway for using the Global Positioning System (GPS) for providing accurate time references for the beacon transmissions. With the expected precise transmission timing that this will afford, the NCDXF feels that automated beacon monitoring stations will be feasible. When so implemented such stations could provide real time data directly into packetclusters to show real time band openings for DXers who are logged onto a cluster. Not bad, eh! Consideration is being given to expanding the system to cover the WARC bands. Selection of frequencies is still somewhat of a problem. In case you have forgotten or have mislaid your crib sheet, here is the timing plan for the current 14100 Khz system.

Minutes	Beacon
00	4U1UN
01	W6WX/B
02	KH6O/B
03	JA2IGY
04	4X4TU/B
05	OH2B
06	CT3B
07	ZS6DN/B
08	LU4AA/B
10	Repeat sequence.
11	" "

If you have any thoughts or suggestions on the beacon network send them to Jack Troster, W6ISQ, NCDXF Beacon Coordinator, P. O. Box 2368, Stanford, CA 94309-2368.

QSL POTPOURRI

CLIPPERTON, FO0 - QSLs from this operation have been coming out. If you have not received yours, it should be arriving shortly. Jay, WA2FIJ, is to be complimented for a first class RTTY performance during that expedition.

SOUTH ORKNEYS, VP8 - Brian, VP8CFM, has been doing a bang up job from Signy Island with gear that was "worried all the way" to him by the IRDXA's, W6PQS. Brian uses GM5KLO as his QSL Manager. However if you are adventurous you can try a card addressed to him direct. He says you can send it to:

Brian Mallon, Signy Island via Port Stanley, Falkland Islands, South Atlantic Ocean

Don't wait too long as Brian will be returning to the UK in April of 1993. When conditions warrant it, Brian puts a nice signal into the upper midwest USA on 15 meters around 1700Z.

MOZAMBIQUE LAMENT- Back in January 1992 I had what I thought was a valid contact with Sylvano, C9RTC. Much to my sorrow, in August my card came back marked SORRY NOT IN LOG. And this is what I waited seven months for??? Well, the week following receipt of that dismal message I had a true blue solid 599 contact with John, C9RJJ, who has W8GIO as his QSL Manager. Kudos to them both! I received my confirmation exactly 8 days later. *From the depths of despair to the heights of joy!* What a strange hobby.

THANKS - Thanks to the following: AA5AU, KW2P, TG9VT, UA9YE, VK2SG, VP8CFM, and the Northerm California DX Foundation Newsletter.

See you all next month.

73 de **Jules, W2JGR** NNNN ■

QSL ROUTES

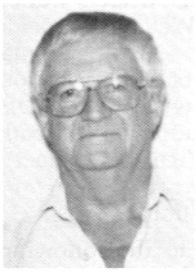
Betsy Townsend, WV7Y
P.O. BOX 644
Spokane, WA 99210

The end of summer is almost upon us, at least in the great Northwest. Like everyone else, I've been busy with the yard work and have had little time for DXing.

Not long ago, I received in the mail a 1992 copy of the book "QSL Routes-World Annual of QSL Managers" from Germany. This 250 page gem is chock-full of great information on routes. The book is compiled by Fritz-Ullrich Schneider, Y41VM, and would be a great asset on any DXer's shelf. Next year's edition is promised to be bigger and better, with over 55,000 managers listed. The 1993 edition sells for US$15 or 20 IRC's, and you even get a supplement. You can order the book from: QSL ROUTES, Theuberger Verlag, Y24HO, Oberwasserstrasse 12,O-1080 Berlin, Germany

73 and 88, de **Betsy, WV7Y** ■

Call	Qsl Routes
4L0DXC	Qsl Via UT5HP
5B4ZL	Qsl Via JSB, BFPO 53, London
5N3ZIP	Qsl Via N5PSI
6W1QB	Qsl Via DK3NP
9D0RR	Qsl Via NT2X
9K2KA	Qsl Direct Box 30, Safat 13001, Kuwait
9M8ZZ	Qsl Direct Box 1084, Bintalu, Sarawak, East Malaysia
A71CD	Qsl Via WA4JTK
ES7FQ	Qsl Direct Henry Palusaar, Vene 2-3, Viljandi Ee2900, Estonia
FR/DJ3OS	Qsl Via DJ3OS
H44JS	Qsl Via H4 Qsl Bureau, Box 418, Honiara, Solomon Is.
HK8CTC/HR1	Qsl Direct Box 3190, Tegucigalpa
J73FTC	Qsl Via N9FTC
J8/N2HNQ	Qsl Via JH4IFF
J80X	Qsl Via JH4IFF
J88BS	Qsl Via WA4WIP
P29BT	Qsl Via N5FTR
S2/HA5BUS	QSL GLOBEX Foundation, Box 49, 1131 Budapest, HUNGARY
S21ZA	QSL Via VK9NS
SV0DV/9	Qsl Via WB4TDB
UA2WJ, Kaliningrad	Qsl Via DL4LH
UG6GG	QSL W.A. Lewtchin, Box 11, Yerevan 375108, Russia
VP8CIL	QSL Via G0EHR VR6WH Bill will be there for another month.
YL2QO	Qsl Via LA5ZU
YN1CB	QSL Via Box 3733, Managua, Nicaragua
ZD7GT	Qsl Via WB2K
ZK1JR	QSL Via AA5WY



CONTESTING

Richard Lawton, N6GG
14395 Bevers Wy.
Pioneer, CA 95666

RTTY CONTESTING - the Wise and the Why-Knots

RTTY Journal Publisher Dale Sinner, W6IWO has asked me to write the Contesting column. Hal Blegen, WA7EGA has taken on a heavy workload and is unable to find the time for writing for the Journal at the presnt time.

Well, first off, congrats to Hal for a great job as Contest Editor. I hope I can generate at least half of his enthusiasm in writing about contesting.

While not exactly a novice to CW and SSB contesting (my first contest was in 1936), I am not an "old timer" to RTTY. I got into RTTY in 1984 when I purchased my trusty PK-232. And while the communications basics are the same, RTTY is really completely different world from CW and SSB.

What is so different about RTTY contesting?

1. You can be totally deaf and still make the world's top score! That's because all calls, pileups and exchanges are displayed on the monitor screen. Listening may help to find an RTTY carrier, but the Mark-Space indicator also does this too. You can't notch out one station to hear another, as on CW, or mentally separate by voice pitch or accent, as on SSB. No. The uniqueness of RTTY contesting is actually seeing all the action unfold right before your eyes, right there on your monitor screen. It's really fascinating.

2. RTTY signals are FM (carrier shift), so the loudest signal takes over the pileup frequency, just like on 2M FM. Weaker carriers are drowned out, as the loudest one prevails. Split frequency pileup operation is also used on RTTY, but not nearly enough. QSO per hour rate is vastly improved using split.

3. Since there is no need to adjust knobs on the radio after the station is tuned in, all that's left is logging, mult/dupe checking, and typing in the station's call. The rest is watching the screen and pressing macro keys.

Here are four approaches to RTTY contesting:

- a) Calling CQ to raise those looking for a QSO.
- b) Hunt and Pounce - to find a station you want to work.
- c) A combination of the above a) + b).
- d) Simply enjoying the moment, tuning around and watching the monitor unscramble the chaos, perhaps jumping into the fray with a quick call.

Let's take a closer look at each one:

a) Calling CQ Let the world come to you. You are the one in command of the frequency. Your efficient handling of the callers, your signal readability, plus your degree of rarity will all effect the number of callers. If you are running low power or a minimal antenna, do not expect a huge following. Your CQing will not produce a high QSO per hour rate as would Hunt and Pouncing. Please NOTE: Before ever calling CQ, try to find a clear frequency, and, as on CW and SSB, before CQing, A-L-W-A-Y-S ask if the frequency is in use. On RTTY, as on CW, a simple "QRL? DE YOURCALL" with at least a 2 second pause will suffice. Plan to assign a Function Key combo that does this. Everyone appreciates a courteous and caring operator.

b) Hunt and Pounce (My favorite) Tune around and find stations calling CQ. When you tune around you'll run into pileups. Stop. That may be a rare one for you. Maybe a new multiplier, i.e., a State, country, prefix or Zone. Listen for his call. Check your multiplier sheet to see if you need him. If so, watch how the next guy raises him. Did he call long? Short? Inbetween others? Most of the time, a quick YOURCALL twice, will do it - if your timing is good. Be sure to note how fast he comes back on each transmission. That is key to when and whether to give another "quick 2". By the way, Hunt and Pounce is a lot easier on the equipment and the electric bill than is CQing.

c) Combination of CQ and Hunt and Pounce. If you are after a top score, this is the way to go. And here's where some top gun operating skill comes to bear: Prioritize the time-gathering quantities of QSO's and QSO points vs. the time spent gathering multipliers. Here's some hints: Hint #1: When band propagation conditions are good, call CQ and closely check your QSO per hour rate, every 10 to 15 minutes. Don't worry about multipliers at this time. Sometimes a rare station will call you - the ones not comfortable with handling pileups themselves. When the rate drops, start looking for the pileups, and hunt for the multipliers before they go away. Hint #2: For the highest QSO rates, always use the highest frequency band that is open at that moment. For instance, when 10M is open, use it first. When it starts to poop out, pick up a few multipliers, then slip down to 15M, etc.. Hint #3: Try to be contstantly aware of what time of day it is in areas you need to work. For instance, activity is lowest when the desired area's local time is between midnite and 6 AM. Hint #4: Band propagation constantly changes between your QTH and the desired areas. Nighttime propagation is nearly always best on the lower bands. But RTTY and multipath are strange bed partners, even on the low bands. Loud stations are not necessarily the most readable when multipath is happening. Try swinging the beam off the obvious path to see if readability improves - even though the station gets weaker. Sometimes this really works. Quite often I try using a different antenna for receiving RTTY, particularly when propagation seems to be changing, or when QRM from some off-frequency station is clobbering my QSO. The bottom line is readability - not the loudest signal.

d) Enjoy the moment This is by far the best way to get bitten by the challenges of RTTY contesting, DX hunting for RTTY DXCC, and pursuit of RTTY WAS or WAZ. And for you newcomers, we do exchange handles often. Also, you'd be suprised to see how many fine YL RTTY ops there are out there. Even before they give their name you'll note their lack of typos and their superb typing speed. And they usually send "AND" instead of "ES". (Don't they?)

To get the most out of Contesting, I've found that the most satisfying approach is to set a goal, and then go for it. It doesn't have to be the high score for your area. There are other goals. See how many States, countries, Zones, or whatever, that you can work during the contest period. For example: During the 1988 CQ WW CW Contest I accomplished a long term goal: to work both DXCC and WAZ in one weekend. I managed to work all 40 Zones and 117 different countries, all on one band (20M) in one weekend - unassisted. I had 547 QSO's. Believe it or not, the last Zone worked was Zone 6 - Mexico!

Preparing for a Contest:

Here's some thoughts you should consider when preparing for a contest:

1. Tell (warn?) your XYL at least one month in advance. Be sure to include dates and times. Write it on HER events

calendar.

2. Read the rules carefully.

3. Decide which logsheets, multiplier and dupe sheets to use. All RTTY contest rules are listed (except the new JARTS contest in October) in the RTTY Contester's Guide, along with all log sheets, dupe and multiplier sheets.

4. Get copies made of what you need, based on how many QSO's you anticipate, plus one or two extras for dry run practicing.

5. Check the beam indicator headings for possible slippage or malfunction.

6. Check SWR on all antennas, all bands, at least one week before the contest.

7. Check RFI/TVI on all bands.

8. Make up the needed macros for: Exchange, your callsign, QRL?, CQ, QRZ?, "WE WORKED BEFORE, OM", "R-R-R TNX" etc..

9. Practice the contest by sending the entire exchange. Use a page from your logbook for entering calls. Pretend and record reply. NOTE: Leave radio off!

10. Keep tabs on band conditions during the week preceding the actual contest. Easiest is to check the low end of 10/15/20M for CW DX activity. Also one can use the NCDXF beacons on 14.1 MHz.

Notes on the First Annual JARTS WW RTTY Contest (Oct 17-18).

(See rules in the July/August '92 RTTY Journal)

This is a new RTTY group, first one in Japan, and this is their first contest. Let's give them our enthusiastic support. While this contest is world wide (everyone can work everyone), why not see how many JA's you can work!

- No rest periods. Full 48 hours.
- Each JA/VK/W/VE call district counts as a country multiplier. Therefore, Japan, Australia, U.S.A. and Canada do NOT count as an additional country multiplier.
- No band multipliers. Countries/Districts count only once, not once per band.

QSO points:

1 point for QSO with same country/district.

2 points for QSO with different country/district on same continent.

3 points for QSO with any station outside your continent.

- Scoring formula: total QSO points times total multipliers.
- JARTS rules do not state if same station can be worked on different bands. This is probably an oversight. I fully intend to work the same station on all bands. There is no additional multiplier, but there would be QSO points to be made, especially when station is on different continent. Besides, it's fun to make a schedule for QSO on different bands, or ask when station plans to QSY.
- JARTS rules require separate logsheets for each band, but do not request any dupe sheets or multiplier sheets. Since we all use mult/dupe sheets for our own edification and enlightenment, I suggest we send them along with the logsheets. It makes it a whole lot easier for the log checkers to go through a potential winner's log.
- "Special award for the 11th from last in all three catagories". This is a new idea, and should encourage ALL to send in your logs. Let's DO it!
- Logs go to JH1BIH at CBA. Must be received by December 31, 1992.

73, CU Soon - in the pileups!

de **Rich, N6GG** ■

N6GG BIOGRAPHICAL DATA

My contesting credentals go back to before WW II as W6MVQ. First licensed in 1935 when I had just turned 13. Got my Class A license a year later, and entered my first contest - ARRL CW SS. Won my first contest in 1938 as East Bay Section winner of the ARRL CW DX contest. (They gave out medals then!)

After the War, and my Naval service, I went to work at the Radiation Lab at the University of California, and eventually to the Livermore Lab working on radiation detection electronics equipment.

I became a member of Northern California DX Club in 1947. I was it's 13th member. Requirements then were to have 25 DXCC countries confirmed. Later I became its President, around 1949. (I was President again in 1977 as N6GG.)

I made DXCC in 1948 (#344) and had my 200 confirmed sticker in 1950. Made WAZ in 1949 (#102). This was mostly CW. I tried to enter all the major CW contests. CQ WW, ARRL DX, SS, and the VK/ZL contests.

Late in 1954 I went to work for Varian Associates, working on the final test stage of Nuclear Magnetic Resonance Spectrometers.

In 1956 I went to work for IBM Research Division in San Jose. My job then was to build feasibility models for those submitting patent applications. Later I worked on scores of interesting projects. I retired from IBM in February 1984.

Obtained Extra Class license in 1970 and the call K6QZ. I joined the Northern California Contest Club (NCCC) in the early 1970's. I've been a continuous member of the NCCC ever since.

In 1977 the FCC offered Extra Class licensees the opportunity to pick their own suffix of the N6 call block. I picked "GG" because of the double letters.

In 1977-78 I was the Editor of the NCDXC Newsletter called, "The DXer". While writing how to chase DX using the Kenwood TS820, I came up with a scheme for split frequency operation using the RIT control. It was a simple switch circuit that would make the transceiver transmit on the RIT frequency. It was like having a piggyback VFO wherever you tuned the main dial. I first thought of calling it "TIT" but soon changed it to XIT - for "Transmit Incremental Tuning". That idea surely got around fast. The very next Kenwood Transceiver model had an XIT switch on the front panel, and others copied them, too.

I live in Pioneer, California, population about 2500. Elevation is 3200 feet. It's cedar country here. They tell me that two-thirds of all wood used in lead pencils comes from Pioneer. I have almost 2 acres here, almost flat, on top of a ridge. There are about 12 100 foot cedars on my property, along with about 10 100 foot Ponderosa Pine trees.

I have a 100 foot Rohn tower with a 20M 5 element Yagi (KLM) and a 10/15M duobander sitting at 106 feet. Also on this tower are two 40M quad loops at right angles, mean height is 66 feet. Also there is a 80M drooping dipole at 66 feet. The whole tower is used as a top loaded vertical on 160M. About 80 feet south of the tower is a 40 ft rotating mast. It supports a 15M 4 element Yagi on top, and a 5 element 10M yagi at 30 feet. Both rotors are Daiwa CR-4P, and use 4 motors in each rotor.

The rig is a Kenwood TS-930S driving an Alpha PA-76PA (contesters call this amplifier "A three-holer" because it has 3 Eimac 8874 tubes in it). My RTTY gear is an AEA PK-232. The computer is an HD Systems 386DX-20 with 89 MB hard disk and 4 MB RAM. I use a SVGA monitor and the OmniKey Ultra keyboard. The printer is IBM ProPrinter 24P. I use the original PC-PAKRATT software.

de Rich, N6GG

1992 SARTG

Worldwide AMTOR Contest Results

Single Opr - All Bands

Nr	Call	Score	QSO	Pts	3.5	7	14	21	28
01	VP5KM	237,945	218	2,735			31	33	23
02	JA3DLE/1	193,270	183	2,510	1	1	31	32	12
03	G4ATG	173,565	157	1,995	4	8	40	31	4
04	OG2BP	170,430	189	2,185	3	11	39	21	4
05	LZ2BE	137,600	153	1,720	6	16	37	19	2
06	G3NUG	114,390	138	1,845	1	3	27	26	5
07	AA5AU	106,080	110	1,360		4	29	32	13
08	G4ZKJ	105,375	116	1,405	4	6	31	21	13
09	G0ARF	98,880	124	1,545	1	5	28	25	5
10	N4CC	95,790	128	1,545		1	30	28	3
11	SM2RMK	92,400	121	1,400			33	30	3
12	VE6ZX	89,280	126	1,440		6	32	24	
13	DL1EAL	82,350	101	1,350			26	25	10
14	AH6JF	69,695	90	1,315		2	15	28	8
15	DL3VBN	56,970	92	1,055	1	8	29	9	7
16	OH2LU	55,550	87	1,010	1	2	25	24	3
17	KC9UU	50,225	77	1.025			27	20	2
18	W1BYH	49,680	72	920		3	23	23	5
19	VE7SAY	43,420	73	835		7	25	18	2
20	SM4RIK	41,830	83	890	1	2	27	13	4
21	WA3ZKZ	41,360	72	940		1	20	16	7
22	N0FMR	40,040	81	910			28	16	
23	SM4RGD	37,410	70	870	1	3		39	
24	JH1BIH	28,080	59	780			20	14	2
25	LA7AJ	19,040	46	560			25	4	5
26	SM4DHF	11,880	43	440		1	14	8	4
27	SM1DUW	11,750	43	470	1	5	9	9	1
28	W4GIV	11,375	32	455			18	7	
29	JA2NNF	10,780	27	385			19	9	
30	W1OPI	10,450	34	475			14	8	
31	W4/TF3KX	8,520	30	355			18	5	1
32	LA5RBA	6,825	32	325		4	11	6	
33	W4IF	5,415	24	285			15	4	
34	VK2EG	5,040	19	280			8	9	
35	JR4GPA	4,675	19	275			14	2	1
36	SM5FUG	2,590	17	185				9	5
37	WB4TDB	1,875	11	125			6	9	
38	DJ2YE	1760	17	160		6	5		
39	SM7BGE	945	13	135			5	2	

Single Opr - 7 MHz

Nr	Call	Score	QSO	Pts	3.5	7	14	21	28
01	YB2OK	28,080	57	720		39			

Single Opr - 14 MHz

Nr	Call	Score	QSO	Pts	3.5	7	14	21	28
01	OG2BP	53,235	113	1,365			39		
02	G4ATG	47,400	90	1,185			40		
03	TA2FT	31,950	75	1.065			30		
04	DL2BR	31,920	69	840			38		
05	SM2RMK	29,040	75	880			33		
06	N0FMR	18,620	60	665			28		
07	I2KFW	17,810	54	685			26		
08	DL5SWB	16,950	50	565			30		
09	GI4LKG	16,905	62	735			23		
10	SM4RIK	15,470	53	610			27		
11	KC9UU	15,120	43	560			27		
12	SP7FQI	14,000	43	500			28		
13	DL2SDE	13,125	45	525			25		
14	HK4OQI	9,975	33	475			21		
15	VE3BLK	9,520	50	595			16		
16	OZ7HT	7,140	25	340			21		
17	W4/TF3KX	5,520	25	290			18		
18	JA2NNF	5,130	19	270			19		
19	VE7VP	5,040	22	280			18		
20	LA3IW	4,500	22	250			18		
21	SM4DHF	4,060	27	290			14		
22	I4IBR	3,760	20	235			16		
23	ON5SV	3,150	20	225			14		
24	PA3DYV	3,080	19	220			14		
25	OG3OU	2,530	22	230			11		
26	VE4GN	2,450	15	175			14		
27	LA4RBA	2,310	21	210			11		
28	OY3FT	60	3	30			2		

Single Opr - 21 MHz

Nr	Call	Score	QSO	Pts	3.5	7	14	21	28
01	VP5JM	36,135	91	1,095				33	
02	SM4RGD	31,980	65	820				39	
03	W6/G4ACU	24,840	80	920				27	
04	JA3BN	18,055	71	785				23	
05	PY2PD	16,605	42	615				27	
06	VE6ZX	12,360	43	515				24	
07	OH2LU	11,880	40	495				24	
08	WA3ZKZ	9,200	44	575				16	
09	G4ZKJ	7,245	26	345				21	
10	N2CQ	6,560	29	410				16	

Single Opr - 28 MHz

Nr	Call	Score	QSO	Pts	3.5	7	14	21	28
01	DH3VY	1,700	13	170					10
02	JR4GPA	15	1	15					15

Multi. Opr

Nr	Call	Score	QSO	Pts	3.5	7	14	21	28
01	LZ2KIM	219,765	200	2,415	5	9	42	26	9
02	SV1SV	116,580	184	2,010		5	33	21	
03	SK4RY	109,135	124	1,495	3	4	39	23	4

Operators of Multi Opr Stations:

LZ2KIM - LZ2MP, Krassi

SV1SV - SV1AMY, SV1AHV, SV1BDO

SK4RY - SM4CMG, SM5CZD

Checklogs:

G2DHV, DJ2XB, SM7BUN, SP7FQI, TA2FT, VE2AVO, VK2BQS

Results submitted by **Bo, SM4CMG**

READER SURVEY

The RTTY Journal would like to know more about you and your Ham radio activities. This information will be useful in determining what type of material the RJ should publish in future editions. Our crystal ball is a little cloudy, so your help will be very much appreciated. Take a few minutes to fill out the survey and return it to us real soon. Future issues will reflect your desires based on percentage of interest. Thanks for helping.

Your age group: 12 to 20 ☐ 21-30 ☐ 31-40 ☐ over 40 ☐

Your license Class: Tech ☐ Novice ☐ Gen ☐ Extra ☐ Advanced ☐

How many years licensed: _____

Average gross income: under $20,000 ☐ $20,000-$50,000 ☐ over $50,000 ☐ Retired ☐

Equipment: _____

Computer/s: _____

Radios: _____

Antennas: _____

Interface gear (TNCs, software, etc.): _____

Favorite Mode: RTTY ☐ AMTOR ☐ PACKET ☐ ALL ☐

How often do you get on the air: Daily ☐ Weekly ☐ Monthly ☐ Contests ☐ Seldom ☐

When do you plan to buy your next piece of radio gear: 1-6 months ☐ Within next year ☐

Will this be a major purchase: Yes ☐ No ☐

Where will you make your next purchase: Store ☐ Catalog ☐ Direct ☐ Pvt. Party ☐

Do you save your RTTY Journal issues for future reference: Yes ☐ No ☐

How long have you been a subscriber: _____

Which of the present RTTY Journal columns do you enjoy the most:

Hits & Misses ☐ DX News ☐ Packet ☐ The Link ☐ Hardware ☐

Software ☐ Contesting ☐ All ☐

What type of articles/columns do you think the RTTY Journal should add?

_____

_____

Should these be added (A) monthly or (B) intermittently? A ☐ B ☐

Comments: _____

A Pictorial Argument

Fundamental Rule For High Frequency Data Transmission

Use

Low

Symbol Rates

Commercial Telegraph Practice

	Symbol Rate	Symbol Length
Good Conditions	200 Baud	5 ms
Poor Conditions	100 Baud	10 ms
Disturbed Conditions	50 Baud	20 ms

Typical Symbol Lengths

	Rate	Length
HF Packet	300 Baud	3 ms
Pactor	200 Baud	5 ms
Amtor	100 Baud	10 ms
Baudot RTTY	45 Baud	22 ms
Clover II	31 Baud	32 ms
Piccolo	6 Baud	167 ms

Performance Comparisions: Good Conditions

(Delivered character rate for the full ASCII printing character set)

	Char/Sec	Char/Sec/KHz
High Frequency Packet	10	5
Amtor	5	10
Pactor @ 100 Baud	6	12
Pactor @ 200 Baud	13	22
Clover II	60	120

Performance Comparisions: Poor Conditions

(Delivered character rate for the full ASCII printing character set)

	Char/Sec	Char/Sec/KHz
High Frequency Packet	0	N/A
Amtor	3	6
Pactor @ 100 Baud	3	6
Pactor @ 200 Baud	0	N/A
Clover II	10	20

If you would care to comment on the above pictorial, send your input to the RJ office. Maybe you do not understand this pictorial and would like an explanation. If so, please write. I am also hoping this pictorial will provoke some interesting articles on the subject of symbol rates. So to those so inclined to writing, please don't hesitate, the RJ welcomes your input. ED.

CLASSIFIED AD DEPARTMENT

First 30 words $7.50, additional words 10 cents each. Cash with Ad. Deadline for ads is the 1st of month of publication.. (Example - Ad arrives by the 1st of September, will appear in the September issue.)

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FOR SALE: HAL MPT-3100 MSO system and DSK-3100 disk drive unit. Like new and bug free. Latest software, with manuals, cables. Trade for AEA DSP-2232, InfoTech M7000, HAL CT-6750 or other interesting trade. Lee, WB6SSW, via CBA or (714) 598-5942

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