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BANDPLAN YES?

BANDPLAN NO?

ANSWER = ????

IN THIS ISSUE

RTTY JOURNAL

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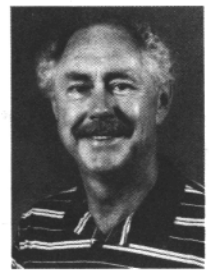


HITS & MISSES

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

BANDPLAN, Yes? BANDPLAN, No?

In this issue you will find this topic again being aggressively pursued by the Journal columnists. It is a subject all of us should take a hard look at.

The present plan has really evolved as a gentlemen's agreement. It has worked fine for many years with a minimum of problems. However, within the last year our gentlemen's agreement seems to have been forgotten. If things continue with infringement being the rule rather than the exception, then we can only look forward to some legislative body making decisions about where we will be operating in the spectrum. I don't think this is really what we all want!

I urge you to read all the views regarding this important subject and then take some action. Either write to me here at the Journal or better yet, write to your own director and outline your feelings about our situation. Whatever you do, please don't take the attitude of "Let George do it". This issue needs the support of all us which includes the International community as well. As I have said before, "United we can win, divided we will lose".

DXPEDITION ANNOUNCEMENT

This announcement came in late from Bob Schenck, N200 of the South Jersey DX Association. A group of Hams plan to be active in four countries with emphasis on Sabah, East Malaysia where they expect to have three stations. The dates are November 16-23 from SM6BS with RTTY fairly certain. The other dates are: November 24-27 from V85, no call sign yet, November 28/December 2 from VS6 and XX9 with various callsigns. The last two schedules are uncertain about RTTY but there is still time to write to the South Jersey DX Association and encourage them. Their address is: POB 345, Tuckerton, NJ 08087.

Tom Christian, VR6BJ

Word from Bruce Frahm, K0BJ tells us that Tom Christian will be attending a conference in Indianapolis, IN July, 1990. His expenses will be paid for by the Seventh Say Adventist Church. He would also like to bring the family but no expenses yet available to bring them along. Howard Phelps, one of the church members has started a fund raising campaign to help bring Tom's wife Betty and their two girls along. If you would like to contribute to this campaign, send your donation to the following address: Howard Phelps, 5580 Lerner Way, Sacremento, CA, 95823.

By the way, Bruce mentioned that he and his wife spent some time with Tom and his family in 1979 during a Circumnavigation cruise. He operated Tom's station on RTTY/CW as VR6BJ, maybe some of you worked him. Bruce also indicated that if some groups might be interested in a visit from Tom while he is here, a contribution would certainly help toward making a visit possible.

SAME OL STORY

I keep harping on how important your support is to the Journal. Not only is it important to the Journal but is also important to all Ham magazines. You hear me complain about the cost of publishing the Journal all to often, I guess, but it is a fact I have to face each month. As an example, if I include a number of pictures, the cost goes up considerable and that's just one example. Who pays for all this? You the reader share in the cost along with the advertisers.

Now when is comes to advertisers, they are interested in numbers. If I ask them for an Ad, they want to first know my circulation before they want to know the price of Advertising. Certainly, they are asking the right question and I give them my figures which are no secret. I also explain that the Journal is a specialized publication wherein the information I publish is not readily available in any of the other publications. It's true most of the major magazines do publish articles about the digital modes but they are not dedicated to these modes and therefore

HITS & MISSES Cont. on page 7

CONNECTIONS

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

Hello Gang. Autumn in all it's splendor has arrived. Likewise great Digital Contests are in the offing. Tune that beam, tweak that rig, fix that coffee pot. Get ready for the fall and winter DX season!

NEW PRODUCTS

AEA has announced the new PK-232MBX with PakMail (TM) and third-party traffic mailbox as a standard feature. AEA claims this is the first multimode TNC to transmit FAX as well as receive FAX. This upgrade also includes TDM (Time Division Multiplex) decoding and a seven-charactor AMTOR sel-cal. Packet collisions are reduced by the addition of Priority acknowledgment to the upgrade. Three more statements have been added to the AEA exclusive "WHYNOT" command plus four more options to the CUSTOM command. The PakMail plug-in board/update is compatible with all PK-232s. Contact the factory for details. I hear the price is in the area of $65 plus $5 for shipping/handling for the retrofit card/upgrade. This upgrade is available only directly from
AEA, dealers do not carry the upgrade. AEA (206) 775-7373.

KANTRONICS announces that they are now shipping three PC programs on one disk and three Commodore 64 programs on one disk. The PC disk is called PC Combo and will consist of Kanterm PC, Pacterm PC and Superfax PC. The Commodore 64/128 disk is called 64/128 Combo and consists of Kanterm 64, Maxfax 64 and Pacterm 64. The suggested retail price is in the $50 class and is available from your Kantronics dealer. For more information contact Kantronics, 1202 E. 23rd St., Lawrence, KS 66046.

MULTIMODE CONTROLLERS AND ODD SHIFTS

The RTTY Journal has received a letter concerning the disparity of certain multimode controllers with "Standard" shifts, from Harold F.Wallick of 1625 Rue Orleans, Bonne Terre, MO, 63628. I will get back to Harold's letter in a moment, but first some background. As most of our readers know, Baudot RTTY started out in the fifties and early sixties using 850 Hz frequency shift keying for HF or AFSK (Audio Frequency Shift Keying) in the case of VHF either AM or FM. Nominally the associated audio tones (as demodulated in the receiver or as generated for AFSK VHF transmission) were 2125 Hz for MARK and 2975 Hz for SPACE. The differential between these two tones is 850 Hz. In the late sixties and early seventies, there was a transition to narrow shift using 170 Hz frequency shift keying with the associated tones of 2125 Hz for MARK (no change from before) and 2295 Hz for SPACE. It should be noted that many VHF FM AFSK nets stayed on 850 Hz shift, especially on the East Coast and Midwest.

Many commercial press stations were using 425 Hz shift on the High Frequencies. The amateur experimenters decided they were not gaining much by cutting the shift in half to 425 Hz so decided instead to cut the frequency shift to one fifth or 170 Hz. With the advent of narrow mechanical or crystal filters beginning to appear in the available receivers, this change to 170 Hz was an excellent move in regard to efficient spectrum management. You could get two to three times as many stations in the same amount of frequency space. There was even some thought of going to 85 Hz shift but the requirement for narrower filters at audio frequencies was somewhat difficult to achieve with easy to find components. Moreover, and perhaps more importantly, amateurs were beginning to realize the effects of fading on signal readability at 85 Hz and to a lessor extent, 170 Hz shift tones, which tended to fade at the same time as opposed to wider shifts which usually did not fade simultaneously (the "In-Band Frequency Diversity" effect). This in-band frequency diversity effect could be utilized by properly designed demodulators to improve copy by switching back and forth between tones, using only the best tone to improve copy (sometimes called single-tone demodulation capability). One good example of this type of demodulator is the Dovetron. So, until the advent of Packet Radio, RTTY shifts have been more or less standard at 170 Hz. However, there were two different "sets" of tones in use. The older standard of 2125/2295 Hz tones was a problem in unmodified SSB receivers because of the local oscillator LSB and USB crystal frequency offsets made it difficult or impossible to tune a signal for 2125/2295 tones. Therefore some demodulators and AFSK generators were modified to permit tones around 1200 Hz but still with a 170 Hz shift.

There are other, more esoteric reasons than in-band diversity for using wider shifts, such as has been recently described by Bill Henry of Hal Communications in some of his technical papers wherein he shows that the percentage of useful power spectra that is recoverable by a properly designed demodulator is improved by increasing the shift to approximately 600 Hz.

Then, during the past seven or eight years, packet radio began appearing on the bands. The MODEMs (MODulator/DEModulator) initially used by amateurs for packet were surplus Bell System 202A data sets which used a 200 Hz shift, on the HF bands. As time went on, commercial packet radio Terminal Node Controllers (TNCs) began to appear and to be compatible with existing TNC equipment, these also used 200 Hz shift. I do not know why the Bell System decided on 200 Hz shift so perhaps one of readers can enlighten us.

Now then, getting back to Harold's letter, he is unhappy with the current trend to "packet tones" in some of the current multi-mode controllers. Specifically, the AEA PK-232 and the MFJ 1278. Actually, only the tones for narrow shift are non-standard in the MFJ-1278, the wide shift tones are standard 2125/2975 for 850 Hz shift. The PK-232 is a different matter as both the narrow shift tones and the wide shift tones are non-standard as far as RTTY is concerned, although they are standard for packet. Thus he cannot use it with his AFSK

Continued of page 4

CONNECTIONS Cont. from page 3

VHF net because they use standard tones at 850 Hz shift while the PK-232 uses 1200/2200 Hz at 1 KHZ shift.

Harold has gone to a great deal of effort in his research on tones and shifts used in RTTY equipment as is illustrated by Table 1. and as far as standard shifts and tones are concerned, the PK-232 falls by the wayside. One possible reason for this compromise between RTTY and Packet is the method of demodulation used in the PK-232. The PK-232 uses a standard MARK and SPACE filter front end. Because of these tuned filters, it becomes more expensive and takes more space to provide multiple filter frequencies that match all commonly used shifts and tones. The Kantronics KAM did not have to make this compromise because of a difference in basic design. Instead of narrow filters, the KAM uses a PLL (Phase Locked Loop) for demodulation and this PLL can be programmed via the KAM's firmware to any tone/shift within certain limits. Incidentally, there is some controversy over which method, that is the tuned filter versus PLL method, provides the best copy in noisy conditions. Would someone like to write a paper on this?

Of course all this discussion does not help Harold one bit. Apparently a number of people in his VHF 850 Hz shift net are now unhappy owners of PK-232 controllers that will not work unless they change to narrow shift, and that means that all those net members who do not have PK-232 or other narrow shift capable TNC/Demodulators would have to modify their gear to narrow shift. It is somewhat a lose-lose situation.

I have personally used a PK-232 for about two and half years on both HF and VHF RTTY but always use it in the 200 Hz shift mode. The local VHF repeaters in this area all use 170 Hz shift and so far I have not heard of anyone having problems with 200 Hz shift on either band group. I know I have not had any problems. But of course that is due to not having to use wide shift for RTTY.

I want to thank Harold for writing and for his efforts in compiling the data in Table 1. Perhaps this will give people in similar situations something to go on when it comes to making a choice of RTTY gear. It all boils down to having to do a lot of homework and preferably talking to someone who is using the gear the same way you will use it before you make a commitment. If anyone would like to continue the discussion in any of it's aspects, please write to me or to Dale. Any contribution to the subject will be greatly appreciated. Thanks for your attention and see you next month. Very 73 **de COLE W6OXP**

TONES USED BY VARIOUS CONTROLLERS FOR RTTY

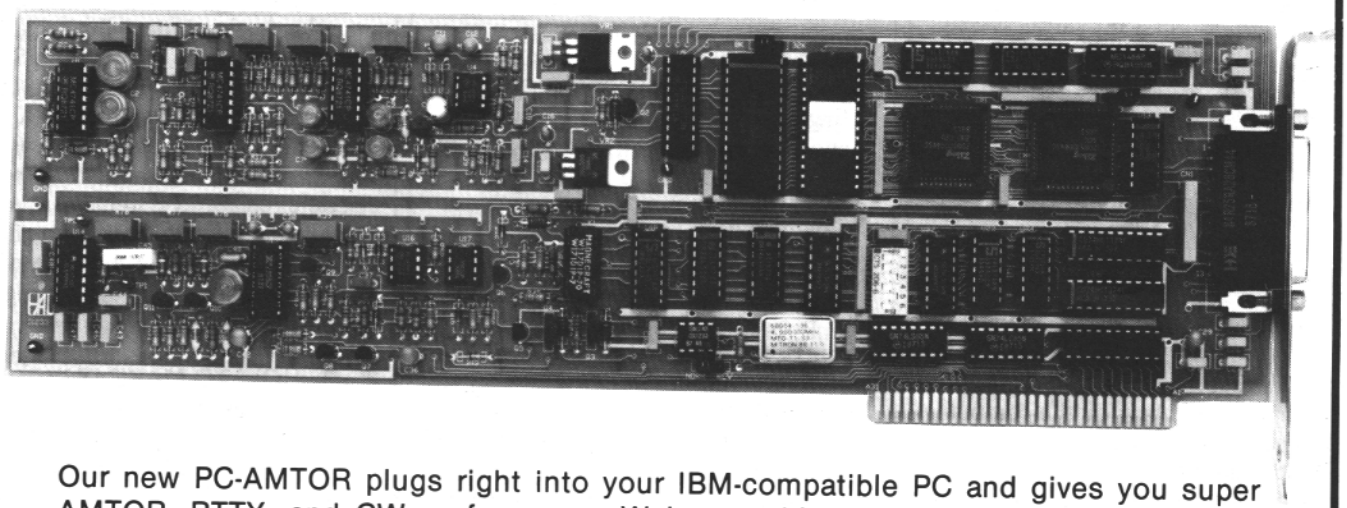
Compiled by Harold, W0NAZ

	HZ Mark narrow shift	HZ Space narrow shift	HZ Narrow freq. shift	HZ Mark wide shift	HZ Space wide shift	HZ Wide freq. shift
USA RTTY Standard	2125	2295	170	2125	2985	850
IARU low tone	1275	1445	170	1275	2125	850
PK-232	2110	2310	200	1200	2200	1000
AEA map-64/2	2125	2295	170	2125	2975(**)	850
AEA map-64	2125	2295	170			
AEA mp-64	2125	2295	170			
KAM ***	2125	2295	170	2125	2975	850
Info-TechM500	2125	2295	170	2125	2975	850
Info-TechM700	2125	2295	170	2125	2975	850
Info-TechM300	2125	2295	170	2125	2975	850
Info-TechM200f	2125	2295	170	2125	2975	850
HAL ST-6	2125	2295	170	2125	2975	850
Data Tech	2125	2295	170	2125	2975	850
MFJ 1229	2125	2295	170	2125	2975	850
MFJ 1278	2110	2310	200	2125	2975	850
Info-TechM92	2125	2295	170	2125	2975	850
Heath HD3030	2125	2295	170	2125	2975	850
Info-Tech75U	2125	2295	170	2125	2975	850
Info-Tech 150	2125	2295	170	2125	2975	850
HAL ST-5	2125	2295	170	2125	2975	850
Kantronics Int 1	2125	2295	170	2125	2975	850
Kantronics Int 2	2125	2295	170	2125	2975	850
HAL PCI-2000	2125	2295	170	2125	2295	850
low tones*	1275	1445	170	1275	2125	850
HAL DS3100 ASR	2125	2295	170	2125	2975	850
HAL DCK3110	2125	2295	170	2125	2975	850
low tones*	1275	1445	170	1275	2125	850
HAL ARQ1000	2125	2295	170	2125	2975	850
low tones*	1275	1445	170	1275	2125	850
HAL CT2100	2125	2295	170	2125	2975	850
low tones*	1275	1445	170	1275	2125	850
HAL CT2200	2125	2295	170	2125	2975	850
low tones*	1275	1445	170	1275	2125	850
HAL CWR 6850/6750	2125	2295	170	2126	2975	850
low tones*	1275	1445	170	1275	2125	850
HAL ST5000	2125	2295	170	2125	2975	850
low tones*	1275	1445	170	1275	2125	850
HAL ST6000	2125	2295	170	2125	2975	850
low tones*	1275	1445	170	1275	2125	850

* = IARU Standard low tones
** = Added by AEA at time of purchase
*** = KAM will produce any tone you want

TABLE 1

PC-COMPATIBLE AMTOR, RTTY, & CW . . . THE NEW HAL PC-AMTOR



Our new PC-AMTOR plugs right into your IBM-compatible PC and gives you super AMTOR, RTTY, and CW performance. We've combined the best features of many of our other products to give you an easy to use, low cost, and very high performance PC terminal card.

• **AMTOR:** We have an entirely new algorithm that is really great! No more long waits to synchronize, no more strange link failures. This AMTOR *works*! Want to try CCIR 625 AMTOR? It's now legal and HAL has it!

• **RTTY:** Baudot or ASCII with an optimized 170-shift two-tone modem; from 45 to 110 baud.

• **CW:** A new algorithm for CW—the best yet!

• **AUTO-MODE:** Yes, that's right—PC-AMTOR is intelligent. It knows the difference between AMTOR, RTTY, and CW. Tune the receiver and sit back—we do the work. PC-AMTOR automatically finds the correct speed, code, and polarity—no more guessing!

• **FRIENDLY SOFTWARE:** Split screen with status indicators and pull-down menu selections. No more confusing key combinations.

• **TWO CONTROL PORTS:** PC-AMTOR is unique. It has two control ports—one using the PC bus and the other for serial I/O control. Run HAL software for normal AMTOR/RTTY/CW operation; use the serial control port and run your APLink or mailbox software. Now you can have both worlds!

• **WHAT—NO PACKET?** That's right. We offer the RPC-2000 and ST-7000 for HF Packet. HF packet uses different data rates and has special requirements. It deserves special treatment. Also, your High Frequency AMTOR, RTTY, and CW deserves better treatment than a compromise "do everything" gadget.

THE PC-AMTOR (Model Number PCI-3000) from HAL . . . . . $395.

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

*STEP UP TO THE **BEST**, STEP UP TO HAL!*

PACKET

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

That time of the month ... again

Well, it is that time of the month when I get in front of the keys on the computer and type away. It seems that as I get older, the days get shorter and that 24 hours do not seem to be 24 hours but about 12 hours. I guess that is the price one pays for age but on to other things.

RTTY CONTEST

I wanted to work the contest and hand out contacts and maybe start something on my own. Well, I had not much luck with hearing anyone or anyone responding to my calls. I guess that people are not interested in working people in the novice 10m band on RTTY or AMTOR. Personally, I do not blame them one single bit. It seems from my own observations that there are very few people who want to work RTTY on 10m in the novice portion of the band. I guess that it is caused by the fact that voice priveleges are easier to use than ones fingers. Oh well. Actually, what I should do is to go and upgrade and get on to 20 meters and hang out with some RTTY types there. But, I will still try out 10m and see what develops.

TCP/IP

Let's see...last month I talked about the documentation of KA9Q's TCP/IP package. So, this month, I will talk about setting it up and how it runs. First off, the HARDWARE. Of course you need a radio, and a TNC. The TNC has to be run in KISS mode with hardware handshaking. There are some of the earlier TNC's out there that do not have KISS mode in them so they will have to be upgraded. You will also need a PC. The software can be run on a floppy based system if you want but just about the whole runtime package takes up a 360k floppy so you are better off using a hard drive.

The best way to put the package on to your system is to create the file system. The following is the file structure starting at the root level:

\net
\public
\finger
\spool
\spool\rqueue
\spool\mqueue
\spool\mail

\net is the directory that you want to put the programs into. In here you want a copy of net.exe and bm.exe. \public is the directory that you allow ftp users to get into. Anything can be in here that you want and organized in any way you want. \spool is the spool directory for the system. The three sub-directories within \spool are for the smtp and bm programs. \finger is a directory that you put files whose names are the names of the users on your system. It is used with the finger utility to find out who is on a particular system and maybe some information on the system that you want information about.

There also needs to be some stand alone files set up in root. They are:

\ftpusers
\autoexec.net
\bm.rc
\hosts.net
\alias

\ftpusers is a configuration file for ftp. This file is used by the system administrator to set up login names and passwords for individuals to allow them various levels of access to your system. The imbedded documentation in the copy of \ftp users that comes with the distribution disks will help you in setting that up properly. \autoexec.net is the configuration file for net.exe. This is where you can get into LOTS of trouble in setting this up. The file as distributed will work with the vast majority of systems out there with a little bit of tweaking required in the bottom of the file with the explicit station routings. \bm.rc is used to set up the bm.exe program with addresses and where the program is to find various items. \hosts.net is an interesting file. It is a file that has in it the IP addrresses of all of the users in your area or that you talk to. It has in it the IP address and the amateur call, and the system name on one line for each address and maybe a name and location. \alias is used to route mail various ways. I personally use alias to route mail that may be destined to me but sent by using my first name or call with no SSID attached. It can also be used to bulk address mail to many stations. As an example, you might have an alias by the name of 'club' and after that the list of peoples calls and systems names. So, all you would have to do is to go and make one mailing and the machine will take care of the rest of the addressing. It can make life easier.

HOW TO MAKE IT WORK

You now have the system loaded and all of the files edited that need to be edited. Now you are ready to take it on a drive. Turn your radio on and put it on a frequency that has on it IP datagram traffic. Fire up your TNC in hardware handshake and in KISS mode. Now run the net.exe. If all goes fine, you should get a prompt back that looks like "net". At the prompt, type "trace ax0 111" and hit return. That will put you into trace mode and show you what is going on that particular channel. You will also want to go and type "trace cmdmode" and hit return when you are at the prompt. This should be done because trace will be on all of the time and this will keep the tracing active only when you are in command mode and off when you are talking to someone or talking to another computer. To do a direct ax.25 connect, you type in at the prompt "connect ax0 w1aaa" and hit return. Of course, you would replace 'w1aaa' with the call of your choice. That will connect you to that station. If you want to go through a digipeater (yuck, ugh, barf, gag,.....), you just append the digipeaters after the first call. It would look like this if I wanted to connect to w1aaa via n6nko-1 "connect ax0 w1aaa n6nko-1". If you wanted to connect to a node and proceed from there, then you substitute the node call in place of w1aaa in the direct connect example and proceed from there with the normal node connect sequence when you are connected.

Now to end the connect, you press f10 and type 'close'. That will disconnect you from the other station. You also use the same procedure to close off a IP

Continued next page

PACKET Continued from page 6

conversation of which I will discuss in a bit.

Since we have discussed the basics of a regular ax.25 connection, let's discuss now how a TCP/IP connect is started and how the whole thing works. You may have read that TCP/IP is a "connectionless" technology. What that means is that two stations are not connected as in regular packet. If you watch the channel in trace mode and find a conversation going on between two TCP stations that are working simplex, you will see that they are sending UI packets and not regular I packets. The software is doing the handshaking and not the TNC's. All the TNC does in this case is act like a buffered modem. There is no need to issue a connect because all of the address information is in the packet and each station is listening for its address. When it sees its address, then it processes that packet. The only time that there is a connection established is when the TCP stations are talking to each other thru a node because of the handshaking going on with their operation. Now that I have hopefully NOT lost you on how TCP/IP communication works, on to making the "connectionless connection".

There are several ways that one can make the "connectionless connection". The commands that you have available are telnet, ftp, finger and smtp. Telnet is basically for keyboard-to- keyboard contacts. A telnet connection is started by typing at the prompt "telnet n6nko-3" as an example. What happens next is that the computer goes scanning the hosts.net file looking for the reference "n6nko-3". If it finds that reference, then it scans that entry for the IP address, and in the case of n6nko-3, it will find the IP address 44.16.0.114 (at least it will find that entry in my hosts.net file). The computer then sends out a poll over the frequency looking for the station that has the IP address of 44.16.0.114 and seeing if it is on the frequency. If it is, then the two stations set up shop and the receiving station is informed that there is an incoming telnet session coming in from someone and you are told that the connection is established and you can go typing away.

FTP is used for file transfers. You can go and connect to a station using ftp and leave a file for someone or get a file from another system. You can transfer ASCII files or binary files using this function. To start a ftp session, type "ftp" and the name of the station you want to contact. When the connection is established, you will get a logon script. It will ask you for your user name. If the system administrator does not have you explicitly defined in his \ftpusers file, more than likely you can get in with read-only priveledges by typing in "anonymous" for the user name. Then it will ask for a password. You can type in anything for this. This completes the logon sequence. From here you can get directory listings, get copies of files, or send files to the remote system. Being able to send a file to a remote system depends on how the remote system is set up. I am not going to go into the details on how to use all of the commands available with the ftp connection because they are all explained in the docs.

I have just explained a couple of the functions available in this powerful software package. The other night while I was downloading a file from one person, he was doing a directory search of my \public directory and yet another was sending mail to me. That amounted to 5 separate connections running at once. This machine did not blink once under that. It worked just fine. I personally have no idea what the connection limit is but I gather that it depends on the amount of memory available. So needless to say, it can handle many connections quite easily on a 4.77 mhz XT. I like it and I suggest that you get it if you want to move up in the world of digital communications.

FURTHER DOWN THE ROAD....

We will be getting into MSYS. MSYS. It is a BBS program that is quite hot right now and looks very promising plus a whole myriad of other things. So, tell me what you want and we will get to it. That can be done by the U.S. Snail for a minimum of $0.25 or you can send it for FREE over radio. You can route the information to N6NKO@WB6YMH-2 #SOCAL.CA.USA.NA or by TCP/IP or Internet to [44.16.0.114] which is N6NKO@N6NKO.ampr.org. 73 and 88 to the ladies

de Richard, N6NKO flag flag data data flag.

HITS & MISSES Cont. from page 2

must handle digital accordingly.

The other side of the coin, I receive letters asking for more pages with more of this information or that and I would like to accommodate but it all costs money. So I am caught in a vicious circle. If I cut costs by reducing the number of pages, then the digital information suffers. If I raise costs to the advertisers, then I must justify that by increased numbers of subscribers. So where do I turn, if I want to continue publishing 24 pages of digital information and also keep my advertisers. It really boils down to the need for more subscribers and that is where you can help. I advertise in some of the major publications and also in many small ones and as result, the Journal is growing. However, there are lots of Hams out there operating the digital modes that have still not heard of the Journal. Help me get to them. The little card I include with each issue (domestic) is a nice way of introducing a friend to the RTTY Journal and an easy way for you to help. Send this card to a digital friend who is not a subscriber, he'll be glad you did and you'll helping the Journal grow. Thanks for helping.

VISALIA DX CONVENTION

This most famous (and attended) DX Convention in the world takes place April 6-7-8, 1990 at the Holiday Inn W, Visalia, Ca. Heretofore there has been no special events for RTTYers, the "Enlightened Ones". We, W.C.R.DX.A., aim to change that in the upcoming 1990 convention! We are arranging a RTTY Dinner and at least one forum for those who not only speak DX; but speak it in RTTY. If you are interested in joining the RTTY gang, contact either Don, W6PQS (213) 322-7112 or Dean, WA6PJR (714) 797- 1782. We need to know how many of the "chosen" may descend on us. Please note that the Holiday Inn was "sold out" a month ago. As of this writing the Lamplighter (209) 732-4511 was half sold out, so please hurry.

Maintaining the spirit of this convention the forums will be DX oriented and we are expecting W6PQS and KN6J to tell us (and show us) about T22, T33 and T32.
See you Visalia in 1990. (Submitted by Don, W6PQS, member W.C.R.DX.A.)

That's it for this month.

de Dale, W6IWO

DX NEWS

John Troost, TG9VT
444 Brickell Ave, Ste. 51-265
Miami, FL
33131-2492

WHOW, CONTEST!

Back from my trip to Boston and New York, and rest up for "the Contest.. and conditions turned out to be quite fair and a lot of desirable stations on the air. Nice new UQ0GZW, RL8PYL, 9X5AA, ZS3GB, HD8EX, several TK stations, HB0/HB9NL, 9M6HF, UO4OWQ, JT0DX, HV3SJ, AT0J, T77C (by DJ6QT), HZ1AB, TJ1MW, KX6OI, BV2B, CE0ZIG (Easter Island), XX9SW, TR8CA, GU0JCI, OD5NG, A22BW, and W2JGR as HD5Z; and I have surely forgotten a few stations.

But Whow, what a job, the bands were crowded from edge to edge, and the pileups were fantastic. For me, by the time the contest was over and I had reached 1048 QSOs in 29 hours and 51 minutes, my left hand did not know what the right was doing, but fortunately I only found 19 Dupes, pleasant surprise. My challenge was to get thru the North American pileups and gain a few 3 point contacts.

I heard of some very good scores this contest and I guess the outcome will be a big surprise to every one; Guiness Book of Records? And all in all the behavior was extremely good by all participants, respecting each other. Great going, though I still think the rules need some changes; more on that later. Anyway it was a perfect opportunity to fill out your country score.

RECENT HAPPENINGS

JT0DX came up late in the month as a rather pleasant surprise on RTTY, and will continue till late October. TK/DL7HZ was up from Corsica already, early in the month, and was later very active in the contest. Good catches were V31AR, C31LHK, FY5DG, HV3SJ, 5Z4BH, ZD8MAC, CU3EM, EA6MQ, 9H1BV, UC1AWW, CT3FF, TJ1DL, VU2JX, back with a four element quad after his previous tribander blew down, UT5RP, with a new IBM Clone and a PK-232, 5V7DP, GJ4MYX, ST2SA (ARQ), FR5ZD, FR5ZU, SV5BS, 9J2AL, TU2OP, TA1F, OL1ER, FK8BK (ARQ), 9K2DZ (ARQ), YI1BGD, TR8CA, TK/OE3CHC, P22KK, P43SF, FO5LQ, ZS3GB, HC5/W2JGR, 9M2HF, RL9PYL, 9X5AA, AH9AC (ARQ) JY9IU and scores of others; even though during a large part of the month propagation was poor, the DX openings still occurred and, in the Northern Hemisphere, with the Summer over, long path openings to the Indian Ocean, Africa and Europe become more the norm on 20 Meters, shortly after sunrise.

And then there was an operation early September by KT7H as KT7H/GUE, from GUEMES ISLAND. This Island is located in Puget Sound and separated from the U.S. Mainland and other U.S. Islands by Canadian Territory, and would thus theoretically qualify as a New Country under Point 3 (b) of the DXCC Rules. Tad, KT7H has applied for New Country status, I am curious as to what will happen, but W.F.W.L.

DX COMINGS

5B4HZ, Rod, left his borrowed Tono for a few weeks at 9X5AA after the contest, to give more of the guys the opportunity at RWANDA. Next he hopes to take it to SOMALIA and ask T5CT to use it. He is with the U.S. staff there. It is foreseen that this little Tono, lent by Gin San, JA1ACB, will do an appreciable amount of travel to various African spots in the next year or so.

No dearth of action from ZAIRE; 9Q5XX continues very active and in adition 9Q5EE, ex SU1EE, has now arrived and is getting up his RTTY gear.

Unfortunately WALVIS BAY, ZS1IS saved their RTTY gear for a later date, so hope this will come about as soon as the ARRL grants New Country Status to Walvis Bay, which is almost 100/100 assured (I hope).

From Luiz, S92LB, no word has been heard. Tom, PY2FR has all the instructions for the gear sent to Luiz from Japan, but Tom has not been able to find him to give him training. Don't hold your breath, but he will be on RTTY one of these days (months?, years?).

And Raimo, OH2BGD should be in TOKELAU, ZK3, on RTTY by the time you read this, or shortly thereafter.

RL8PYL is still very sure of his plans for at least XU, KAMPUCHEA and/or S2, BANGLADESH. May the Lord be with him!

The plans for A51, BHUTAN, by VU2JX and his friends are far from abandoned, no details yet, but they are doing their utmost to get permission, and if they do, I will come back to the readership for loans of gear to other help.

VE3JPC, Jim, who was VY9CC in the Contest, still plans on his African trip for late this year/early next year (SENEGAL, MAURITANIA, GABON, THE GAMBIA and LESOTHO) but the political climate in some of those countries is a bit cloudy, so do not expect this as a sure thing.

ZS8MI, MARION ISLAND has been reported on 18 September on 14,083 at 1535, and also JA1BLV met him at 1425 on 2 October working SSB on 14,151. He asked him for an RTTY QSO and, "Bang", there he was on this same frequency. He has promised to more active on RTTY, so watch 14,090 Mark, around 1400Z.

Still in the rumor stage: also a big Expedition is planned to THAILAND, HV. Another rumor is that a West Coast U.S.A. operator is about to decide on an expedition to H44, SOLOMON ISLANDS and VK9L, LORD HOWE ISLAND. Don't quote me, strictly rumors of one kind or another. And there is a persistent rumor that 5A, LIBYA will come up on RTTY any day now?? And final rumor is that AVES ISLAND, YV0, will be up on RTTY during the next Venezuelan expedition in 1991.

The BOUVET, 3Y, situation gets more interesting by the day. The former crew of Peter Island appears all set for late

Continued next page

DX NEWS Continued from page 8

December/early January. But besides that a U.S. group of 18 operators, including K7JA has planned a 12 day all band operation from very early February 1990. God Bless you fellows! Hope it will work out for you (and us).

Larry, TZ6VV, is gathering RTTY gear to bring MALI back again on this wonderful mode. His gear is in transit, and he will be in MALI for 3 years on a contract, so I don't forsee MALI on the "10 Most Wanted List", will we Luciano??

And there appears to be some decrease in activity from "countries", not yet approved by the DXAC and ARRL. The previous activity from Conway Reef, Ocean Island (Banaba), Austral Islands and Marquesas Islands is still under discussion by the DXAC, and I guess those delays have not encouraged any new ventures in similar places. K8NA is vice-chairman of the DX Advisory Committee and you can write him with your views.

And finally, a JA and some KH6 stations hope to activate PALMYRA, KH5 in March next year.

EXPEDITIONS

The story of the Abu Ail Expedition in this Journal issue, by Heinrich, DJ6JC illustrates the problem and expense such operators have to go through to make it possible for all of us to catch a New Country. since the A15AC trip, which gave 660 RTTYers a New Country, Heinrich has operated from TY, Benin, 5U, Niger, and 3D, Conway Reef. And you know what? Heinrich does not have any of these countries confirmed himself for DXCC credit!

I know we are all a bunch of stingy Hams, but don't you think that an unusual New One is worth a few bucks in support?? Not even thinking about the guy who lost his life off Spratley a few years back, these Expeditions are difficult, often dangerous, and do nothing for the expeditionary themselves. They only have the thrill of operating and being "wanted": never mind who it is, these guys are certainly worth your support and mine. And this support will help to assure the success of the expedition. And in between all that they have not even worked the country themselves.

FREQUENCY CHAOS

The problem with the Packet Incursions in the RTTY segment has generated a lot of mail. Some U.S. Hams requested the opinion of the ARRL. An Italian Ham asked the Italian authorities. IARU was approached. The general result seems to be that there is no regulation anywhere that definitely divides the HF Digital Spectrum into Packet, RTTY and AMTOR segments, except the so called, unwritten "GENTLEMEN'S AGREEMENT". And that calls for the Packet frequencies to be above the .100 mark frequency in each of the HF bands. Well, all I can say, that when we see inefficient, every re-trying HF Packet on top of the ARRL RTTY bulletins on .095 Mark, then I think that HF Packet lacks a few gentlemen.

This is no joking matter. If you wish to pick up the ARRL bulletins on 21095, or 14,095 Mhz, Mark Frequency, it is a lost cause with the QRM from HF Packet Stations (no gentlemen), who have claimed this frequency as their own.

It specially gripes me that there is plenty of unused space available above 21,100 Mhz.. so why is it necessary to sneak into the RTTY portion. On 20, I agree that more space then 14,000 to 14,110 Mark is needed for the innumerable Re-Tries, but if that space is taken out of the 20 KC RTTY portion, then the RTTYers will be forced into the 10 KC AMTOR portion: and AMTOR in turn into the 70 KC CW portion of the band. It is high time that the IARU, the various Country Authorities and Amateur Organizations do away with the Gentlemen's agreement and make the apportionment of the digital portion of our precious band a matter of LAW. And while they do that they may as well legislate where the unattended RTTY beacon mailboxes should be located.
Please, the RTTY JOURNAL WELCOMES YOUR COMMENTS! Pro or Con anything: Hi!

CONTEST RULES

Unfortunately, I have had a few complaints, ranging from Europe to Asia, that questioned the tactics of some of the Multi Operator stations in the contest. It was noted, correct or not, that some of the Multies appeared to be working more than one band at once, i.e. two or more transmitters operating at the same time. That of course is difficult to prove and during a Contest a Contestant sure does not have time to make an accurate record of what his competition is doing.

Now the Contest rules are ambiguous: CQ MAGAZINE states, in it's article written by KT1N in the June issue, page 28: Operator Class: A. Single operator B. Multi operator, SINGLE transmitter, all band entry only.

But the RTTY JOURNAL, in it's July/August issue states: Operator Class: A. Single Operator B. Multi-operator (must be an all band entry with only one transmitted signal at one time).

Whow: do we have two different contests?? One that permits one transmitter only, and one that permits a transmitter for each band?

That is nice, then pick the rules you wish to live by. You now may have two or three transceivers, each with it's own antenna, and manned around the clock, scan the bands continuously, and when one of these "secondary" stations spots a desired multiplier, he just tells the current transmitting station to stand by, while he makes the contact with that station.

You could even build in relays to make it impossible for but one station to transmit at the same time and have a real deal: xceiver A is on 20 meters and calls CQ: XXOXX replies and is given a report; at that moment xceiver B. spots ZA9BB on 40, and as xceiver A is listening to his report, xceiver B quickly calls the ZA9 with a report and then stands by for ZA9 report to him, while xceiver A gives his acknowledgment to XXOXX. And so ad infinitum.

Is that correct? Under the CQ Magazine Rules it surely is not, in my opinion. Under the rules as published in the Journal, it possible could be interpreted that way.

I am no lawyer, but what also is at question is: IS IT ETHICAL?

Continued on page 16

MARS

Article submitted by:
Ken Moore, W6WIS, 9 Lantana Pl,
Rolling Hills Estates, CA 90274

For the fourth time the 1989 Trans Pacific Yacht Race daily operational statistics reporting was handled by AMTOR. The race takes place every two years, usually in early July, with the starting off at Pt. Fermin, San Pedro, CA and the finish at Diamond head, Honolulu, HI. This year 49 boats participated.

Beginning in 1983 the communications have been handled as an Army MARS project by Paul, AH6D in Hawaii, myself in Los Angeles, and Larry, KB6FW on the communications vessel. The Comms. vessel poles the yachts on marine SSB at 8 AM PDST daily to obtain position, weather and any other pertinent information. Then at 10 AM the vessel contacts either Los Angeles or Hawaii and sends the daily report. If the report is sent to Los Angeles, the LA station puts the report into the race headquarters via 2 Meter Packet where it is released to the press. Immediately thereafter the LA station sends the report to the Hawaii station who gets the information to race headquarters at that end. If propagation favors sending the report to Hawaii, the process is reversed. The race duration is from two to three weeks depending on winds.

The daily report consists of nine columns of data with one line for each vessel in the race. Except for the vessel names the remaining columns are figures. With a 100 watt transmitter (TS430) and a limited capability antenna on the Comms vessel, AMTOR has proved to be the ideal mode. This year's race was a fast one with only 13 reporting days. In that period no fills were required and watching the collimated data as it was coming in was a real pleasure. The Woodpecker was in there a number of times with the only effect being a few extra RQs'. On one of the days a CW station tried hard to jam the vessel transmissions but to no avail. Frequencies used were just above 40 Meters and just below 20 Meters (MARS frequencies).

At race headquarters the Long Beach Yacht Club Radio Club filed the daily reports into the California 144 MHz BBS network as well as a nationwide BBS. In Hawaii AH6D made the reports available in his 14 MHz AMTOR BBS (APLINK) where the information was picked up daily by a number of stations in the Pacific Basin.

A typical report is shown below. It is in abbreviated form due the space necessary to reproduce the entire report. Only part of one class of boat is shown for one particular day along with the weather information. There are three other classes and the complete report is about two pages long.

1989 TRANSPAC RACE POSITIONS 91 HOURS JULY 4, 1989

CLASS A	POSITION		DISTANCE		TIMES		STAND	
YACHT	*LAT*	*LON*	*FROM*	*TO*	*ELAPS*	*CORR*	*CL*	*FL*
1. Merlin	26-23	134-22	941	1324	218.9	213.8	16	27
2. Silver Bullet	24-30	134-54	1029	1282	204.3	195.0	4	4
3. Evolution	26-02	135-22	999	1267	206.5	197.0	7	8
4. Drumbeat	25-18	135-06	1010	1275	205.9	196.3	6	7
5. Mongoose	25-05	135-44	1046	1240	198.8	189.3	2	2
6. Chance	25-45	135-23	1008	1264	205.0	195.5	5	6
7. Blondie	25-47	135-33	1015	1255	203.5	193.9	3	3
8. Citius	No Report							
9. Ragtime	24-45	134-20	995	314	211.1	201.2	11	13

AND SO ON!

TRANSPAC WX
No. 1 Wind 0055T 15Kts Brokn 30.20 In
No. 22 Wind 042T/16Kts 1019Mb
No. 33 Wind 035T/12Kts Ovcst 1019
IMS No. 4 Wind 012T/16 Seas NNE 4 Ft 1024Mb
IMS No. 7 Wind 350M/16-18 kts ovcst
IMS Wind 16 Kts
End of Report

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PS Form 3526, Dec. 1985 (See Instructions on reverse)

CONTESTING

Hal Blegen, WA7EGA
2021 E. Smythe Rd.
Spangle, WA 99031

It seems safe to say that the CQWWRTTY test was another success. A measure of activity is the 1700 Q's worked from the Galapagos. Since the condition of the available antennas can change overnight (ala-HUGO), singing the praises of one particular contest site over another can often be misleading but this year's CQWW, El Junco on San Cristobal Island was a wonderful surprise. With several 100-foot towers, rotatable monobanders on 10 through 40 meters and a new 6KW generator, the HD8EX operation was far from primitive.

I would again remind purchasers of the Hi-Gain beams to install the rope kit. Without the ropes, the metal fatigue in the element tips caused by low wind vibration will eventually result in a 100-percent chance of failure. Murphy, who decided that Saturday night was the time to strike, left our 15 meter antenna resonant on about 6 meters with half the contest yet to go.

TECHNOLOGY AND THE TEN-MINUTE RULE

From WA7EGA (and recently at HD8EX), the questions about multi-single operation have times been raised. The question usually goes, "I just worked you on 40 meters, how did you beat me to 20?"

The rules themselves rather than any technical restrictions turn out to be the limiting factor. If there is no rule forcing a station to spend a specified amount of time on a band before moving to a new one, then the only restriction is one signal on the air which, for a mode as slow as RTTY, is almost no restriction at all.

One of the early issues of the NCJ (National Contest Journal) outlined a relay system for quick band changes between two rigs in multi-single operation. Jay, WS7I and I updated the circuit to one consisting of a pair of boards using a 4049 CMOS chips (multiple NAND gates). We use a pair of ICOM 751's, one for spotting, one for rate. Each rig is keyed through a NAND gate which requires the other rig to be "off" to change states. This ensures that it is impossible for both rigs to be on the air at any one time. Although very frustrating to the operators who are in contest competition for the right to transmit, by using very short transmissions, the delay caused by the single signal limitation is almost unnoticeable to the station being worked.

When the idea was first conceived, Jay, WS7I and I did some testing based on the a system of mutual cooperation and signal lights to show which operator was transmitting. We thought that we could take turns. Forget it! Contest egos and timing pressures on each op are such that this type of operation CANNOT be legally attempted without an electronic transmitter lockout to limit operation to one signal. It will only improve the score if both operators limit all transmissions to less than thirty characters (about five seconds). If more than a few seconds elapse between call and answer due to the other operator getting wordy and locking you in receive while he chats on the keys, rate will suffer.

The second bit of required technology is a bandpass filter for transmit which has sufficient rejection to allow high-power operation of antennas in a stacked, Christmas-tree configuration. For these we used a circuit published in QST some months back. The three pole configuration was required in all cases. It turns out that receive filters, regardless of how sharp, are not enough. A good bandpass on the transmit side will reduce the phase noise generated by most systhesized rigs before it goes to the amp. The phase noise, while below FCC acceptable specs from the exciter, will often be enough to blank the receiver on the off band.

If there is any interest in the schematic for either the lockout box, or the band filters, write me for details at my new address (column header).

WA7EGA is moving

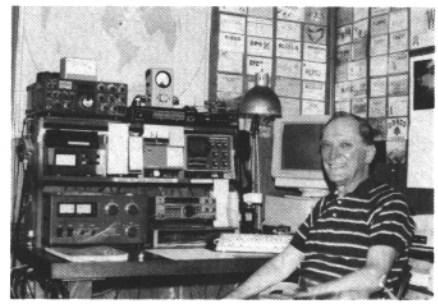
At this writing, all antennas and towers are on the ground and winter is fast approaching. It is going to be a foot-race with the snowflakes to do any contesting this year.

Hope to see you on the air soon. 73's
de Hal, WA7EGA

FOUR HAPPY CONTESTERS

George, KB2VO - Florida

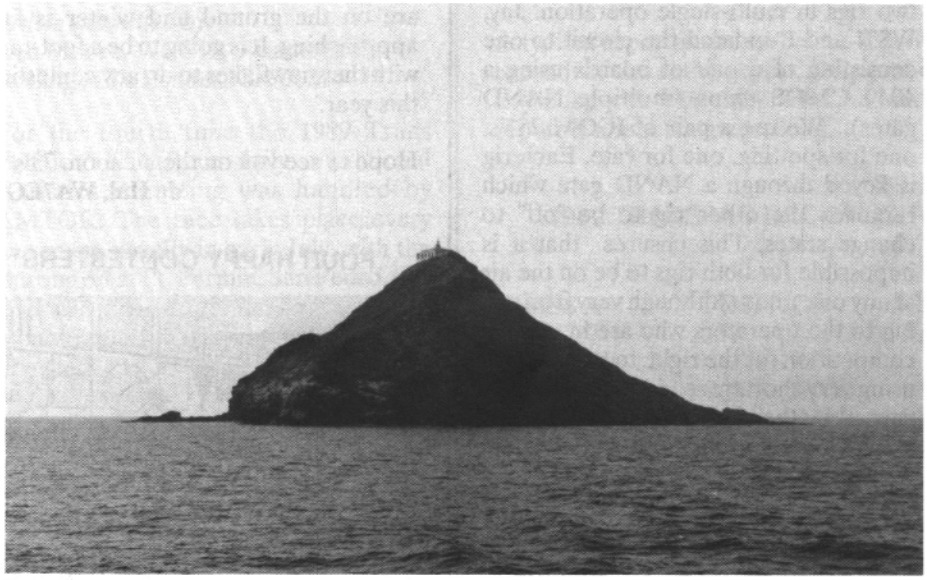
John, TG9VT - Guatemala



Jules, W2JGR - New Jersey

Ray, VE3UR - Canada

INTERNATIONAL



Quion Island of Abu Ail DXpedition. 104 Meters above sea-level. Upon arrival, temperature was 38 degees Centigrade. Story below details this dangerous venture.

ED: *This article un-edited to refect it's authenticity. Submitted by Heinrich Lumpe, DJ6JC*

Abu Ail and Jabal at-Tair are parts of a chain of Islands which are rise out of the water at the exit of the Red Sea. The Abu Ail Islands are two islands, the little one is called Pile Island and rise about 87 Meters and the Quion Island 104 Meters over the sea level. The geographical coordinates are 14 degrees 5 min. N and 42 degrees 49 min. E. The lighthouse on the Quion Island is build up in 1906 by 400 slaves under Turkish governmental power. It must be a very hard work to carry up the construction material to the top of the mountain island especially the central part of this building, which is a cylinder with 2.5 Meter diameter and a height about 12 Meters. This cylinder is made from cast iron parts and fit accurate together with wrought-iron bolts and nuts.

In 1987, when Baldur, DJ6SI and me was planning the A1 DXpedition, we don't know about the difficulties which we have carry out, but after long time we find a man who was able to give us the help which we needed. This man was an expert in African affairs and he gives his know-how to our project.

Now we could inspire Harry, DL8CM, also a well known DXer for this trip. We had to arrange our equipment and soon we are ready to leave for Djibouti via Brussels and Paris.

We arrived Djibouti early in the night of 31 Jan 1988 at 0100, the Temperature was 38 deg. C. Our man made the deal with the Custom and Immigration Department. We had no trouble with the radio equipment import.

In a little Hotel we had to stand by for the departure to Abu Ail with the supply vessel and a crew of welding workers, which has to do some repair at the lighthouse Abu Ail. The lighthouse manager gives the permission for radio operation and accommodation on the lighthouse, but not for using the power. Now we still had to use our little generator. Canned gasoline and batteries must be provided. Gasoline okay, but batteries? But with the help of our man we find big tropicalized 12 V. batteries with 120 A/H rating.

Meanwhile we got license for Djibouti with the help by our new companion. J28SI was three hours later in CW on the air. In lack of a mounting place for a second antenna, we had to split the one antenna and so I passed through my first DXpedition RTTY pile-up. This was a pretaste for the coming Abu Ail operation.

Three days later on the 6th of Feb we had to depart from Djibouti Port to the Red Sea Islands. All the DXpedition equipment and food supply for the complete crew must be stow on the vessel. Two hours later we leave the port. After 20 hours of navigation we saw the beacon light of our destination and short time later the island as a peaked cone in the pale moonlight.

The lighthouse crew, three men and two donkeys brought the whole equipment to the top of the island. The way to the top was a very dangerous steep and small way, one side the high cliff on the other the depth and around every corner strong wind was blowing.

After three hours of climbing all equipment was on the hill. The antennas and the power had to be installed soon. The place for antenna mounting was small and we suspect strong interference together. The two ground-planes for 10/15/20 Meter and a windom for 40/80 Meters are installed quickly.

Now, and this was one of the funniest things, I had to convince A15AA and A15AB that RTTY is also a mode that many Hams wants for the DXCC. They never had seen RTTY operation before and such mode on a Dxpedition? For their opinion was the RTTY mode to slow to bring up good results in the operation time.

My ICOM 735 with the homebrew RTTY TU, and audio filter modem with a single board computer, a LED display and the Olivetti M10 works very nice. During the operation time I modified my self written basic terminal program some times, to make shorter QSOs.

The first RTTY connection from Abu Ail was the QSO with Ted, W2FG and after the following QRZ the band was crazy, I can't believe, but this noise was a pile-up and after one hour and 40 QSOs, the antenna goes to the SSB operator A15AB and he has also crowded pile-up.

In case of the small place on the mountain top, we had to agree together for interference, so that only two stations could operate at the same time.

The next two days it was every time the same noise on the bands and over the whole time, 43 RTTY hours I had 660 QSOs in the log.

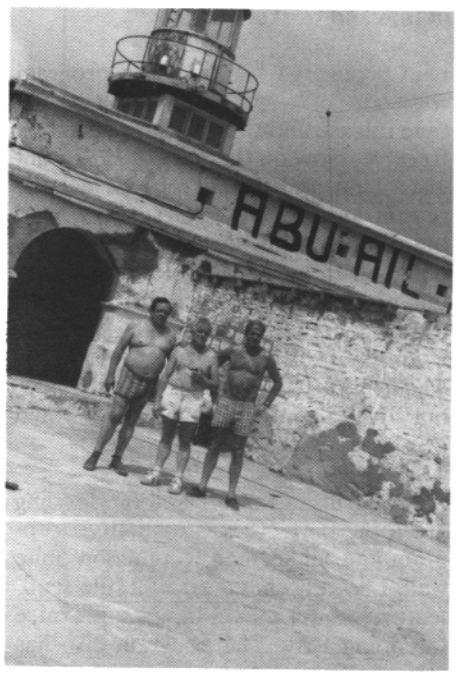
The time on the lighthouse passes very fast. The welding workers finished their work 24 hours early, so we had to pick up our equipment after 90 hours on the lighthouse island Quion and in the evening of 11 Feb 1988 we had to depart.

On the long sea way back to Djibouti we checked the logs. The total time on the Abu Ail lighthouse was 90 hours including the rest periods. During this time our crew was running 9060 contacts, 5700 CW QSOs by A15AA, 2700 SSB QSOs by A15AB and 660 RTTY QSOs by A15AC. Think it is a good result.

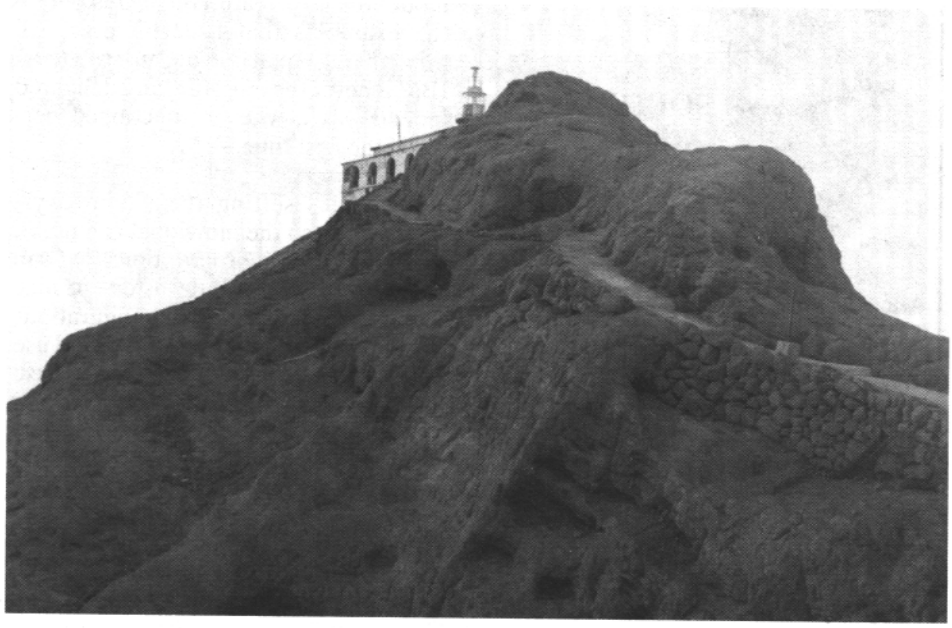
By the way, please do not call in a running QSO and make trouble. RTTY is another mode than SSB and CW. A modem cannot discern tones as well as a human ear and a necessary checkback spends expensive minutes of the few DXpedition time.

The A1 operation was my first D-Xpedition and I hope to find more rare spots on the world to made RTTY contacts with all of you.

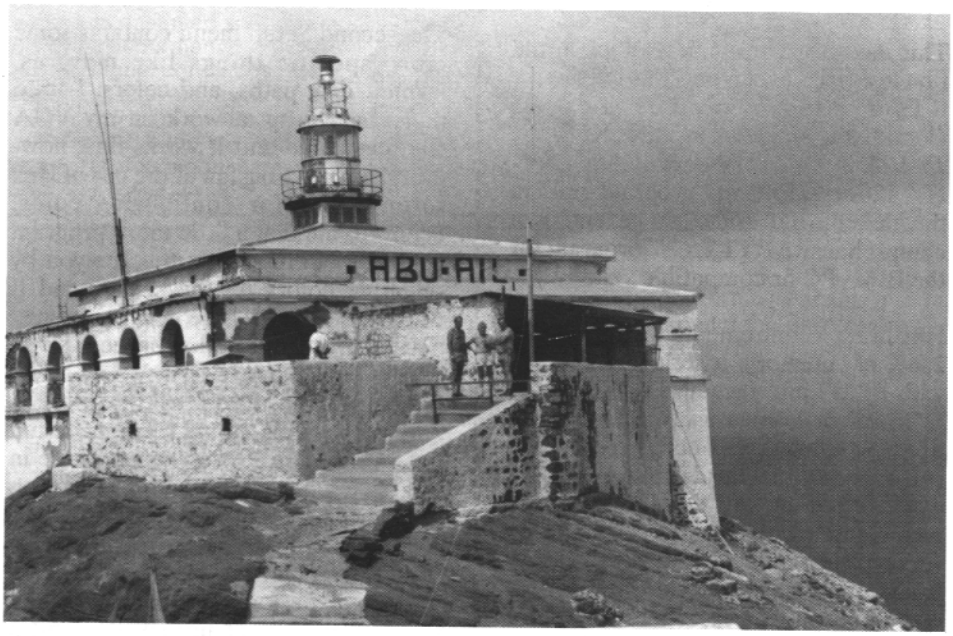
de Heinrich, DJ6JC



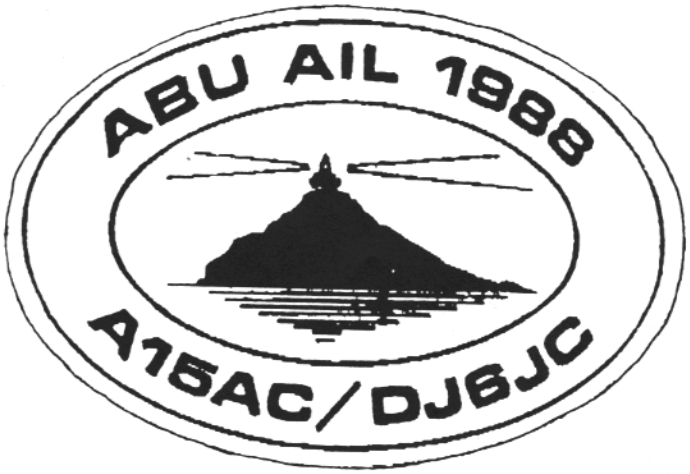
L. to R. DJ6JC, Heinrich, DL8CM, Harry, DJ6SI, Baldur at entrance to lighthouse. Wx. was 38 deg. C.



A long haul up a very narrow pathway can be seen in this photo.



A good look at the lighthouse installation which was built in 1906 by 400 slaves



SOFTWARE REVIEWS

Jay Townsend, WS7I
POB 644
Spokane, WA
99210

Home again from this year's CQWW RTTY contest which Betsy, Hal and I participated in from the Galapagos Islands for the second time. Projects seem to have backed up on me while we were gone, like they always seem to do.

Software Review -- CompRttyII

This month we are taking a look at the first in a series of current state-of-the-art RTTY programs. The first is CompRttyII by David A. Rice, KC2HO, 25 Village View Bluff,Ballston Lake, NY 12019-9235. This program sells in the under $100 dollar range and is a comprehensive RTTY/CW program for the IBM- PC or compatible system.

Hardware requirements are as follows: 256K of memory, a serial port, a TU with RS232 interface and it will run on DOS 2.0 or later. I used a floppy disk drive to start and finally loaded the software on the hard disk. Seems to work fine either way. KC2HO has a real nice manual with a hard cover and the very typical size of all the early software. It lays open on your desk or work table very nicely and is a pleasure to read and work with. Dave starts out with some clear instructions on how to set up the hardware to work with the program.

He suggests that you get things working properly first then do the tutorial examples and finally progress to the actual on the air use of the system.

For those of you unfamiliar with hooking up devices to the RS232 serial port I suggest digging out some of the back issues of the Journal and reading the parts that Cole has talked about. Lucky for me the configuration that I am going to use the Flesher TU 470 which was the model for the Heath HD3030 is one of the examples that KC2HO uses. All things being equal hooking up stuff to an IBM is never the most fun, and delighted indeed was I, when it functioned perfectly the first time.

Next comes setting the CompRttyII software up so the individual can use it. There are a number of options that can be tailored to YOUR tastes. A nice touch you can save these configurations to disk and recall them later. I would use this feature a great deal since I use RTTY in many different ways. Dxing, contesting, Air Force MARS, and just ragchewing. You can save into files the individual setups.

Some of the types of configuration specifications are: Com Port, Mode, Parity, Speed, Idle Type, T/R setup, Full Duplex, and different Carriage Return sequences (useful for MARS).

The second Setup menu contains some more specific things like margins, printer, disk paths, and colors. I fired the program up at work on my VGA color machine and it works fine, however, I am not a big fan of the use of Hex setup codes for configuring color. Seems to me that a little more program could be written to do this for you by selecting colors on the screen and it would be better. There now exists such a wide divergence in the way colors and PC's work. EGA, CGA, VGA, super VGA and so on, all look a little different. And most of all, colors seem to be fun but cause a lot of problems in noise in the shack. See last month's article on hooking up PC's in the RTTY Journal.

I found the Key String setup a little confusing and must admit that I am still not sure if you can set up a WRU and a couple of other things at the same time or not. I will be doing some more investigation on this and will let you know as time goes along. I have a need to get the Air Force MARS broadcast which come on in the daytime once a week down on disk for editing and re-broadcast on a region basis. And I also like to have a WRU set-up for other purposes. Perhaps I shall have to fire off a letter to David and find out.

Well CompRttyII worked fine on receive as I fired things up and the ICOM 751 was copying just like normal. I had no problem with the computer I set up just to do this with. Its a old ITT box running a 286 processor on a old XT bases system. Really a strange little computer but seemed to be working fine. The program came up in the nice split screen mode with an area for status messages and seemed fine. I tuned around the band's a bit and found Jules, W2JGR who was just getting ready to leave for Ecuador for the contest. I sat by and read the mail for a bit and had no problems at all. Comp RTTY II uses the standard(at least it seems standard now) collection of Function and Control Function and Alt Function keys that most good programs use these days. I am from the old school and am afraid that since I learned WordStar those many years ago and use the same command structure in programming with my Turbo Pascal editor that I shall never quite get used to all the other ways. But it is apparent that for most folks the Function and Ctl/Alt function sequences is a lot easier to learn.

CompRttyII has some keys that seem to work my way. I just wish he had more !! I was a little confused by using the same sequence of Control-F2 to both start transmitting and to embed it in the text to return back to receive, but it seemed to work OK and I quickly got used to it. Having used MBA-TOR for so long it seemed a little strange not to use the Control-E. Alt-F2 is the emergency stop button and worked fine.

One problem I had with the program was the lack of a configuration on the time release and start from Transmit to Receive. Now on the ICOM 751 I want instant on and instant off, in fact the reason I made WA7EGA throw away the old HAL keyboards was that long delay on firing up. I could always beat him up in a pileup (since when we used to get a lot of DX by tail ending) because I could insert my call rather quickly. The CompRttyII program is not so slow, but I feel a configuration of this would be a nice feature.

All the frills of buffers and file sending are a big part of the CompRttyII program and all seemed to function quite well. I used both buffers and "file send" features and it makes things quite nice for doing Rtty. The program also has very good support on both transmit and receive for the picture enthusiasts.

Continued on page 16

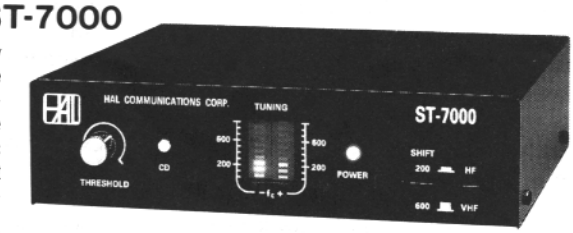
HENRY RADIO IS THE PLACE
. . .THE BEST PLACE
to fill all your data communications needs

The TEMPO MPP1

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

HAL Communications' ST-7000

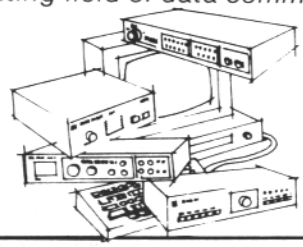
HF-Packet Modem. . .a high performance modem designed specifically for 300 baud HF-Packet. It offers no-compromise performance to assure optimum operation under the most demanding signal conditions. Techniques developed for government and military use are used in the ST-7000. AGC-controlled AM signal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



The PK-232 by AEA

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

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



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

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

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

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SOFTWARE Continued from page 14

Logger -- CompRttyII has an additional feature which so far makes this program function in a very unique manner. There is a full screen logging facility which can handle logging your contacts for you at the same time. This permits display, printing, and searching of your log files while using the RTTY program. I had only a limited time in using this feature, but you hit F7 and it sends info to the log in a format that you can specify. I think with some research that I will be able to use this for contesting. And for a single operator it should be quite a hit ! It is mentioned in the manual which database that the log program is based upon but since the output is in fairly standard form it looks to me as if you could put it into almost any database program for further data manipulation. I would like to see some expansion of the program for contesting purposes and think that I will have to expand on my use of this feature with the program author.

There is available a special version of the program for the A.E.A. PK232 and while I have not used this version I would expect that it's function would be about the same. Never owned a PK232 yet, but there are sure a lot of you out there that use it.

The only fault I found with the program was the security system that KC2HO uses to keep people from copying his program and passing it around to various friends and users. He evidently embeds your callsign in the program and you must use it every so often or the program stops. In my case with both Betsy, WV7Y, and I using a program for two major uses we would need 6 callsigns embedded into the program. We are both region Air Force MARS officials and therefore have two Air Force Calls. And if we were going to use it for a contest another call might be used. I think that the author would have no problem in supplying a version with whatever calls you need in it.

Software piracy remains a problem for all and a good work like this certainly deserves the author a return on his/her investment of time, energy, and money. CW abilities of the program were not tested or investigated but I see no reason that for transmit purposes they would not work. I have never used a program that copies CW all that well. The lack of AMTOR ability of the program is certainly a negative, but perhaps that ability will be forthcoming from the author. The version that I have tested is about eight months old and there may well have been some updates to the software. CompRtty II is certainly a very good program and I can recommend it to the Rtty user.

Next month I want to take a look at DSRTTY a program put out by HAL with some of there products. It is another RTTY program that many are using. Hope that all your antennas are still in the air after the recent storms and that all enjoyed the recent CQWW RTTY contest. I am in the process of putting together and up a new KT34-XA antenna from KLM. The tower is going up to 65 feet and the new antenna on top. Cards for the recent operation at HD8EX go via Ted, HC5K at Box DX, Cuenca, Ecuador. If you have any problems getting a card let me know and maybe we can help.

I will also have a couple of seperate reveiws on some Dxing software that John, TG9VT has sent me. It has to be seen to be appreciated and I will ask John how to acquire it. Mail to John still is being returned.

Also to be reviewed will be the Logging program made by Hal, WA7EGA. It is the finest contest logging program for RTTY off the market !! We have been using it in all of our contest efforts for the last few years and the features it has are almost unlimited. **de Jay, WS7I**

DX NEWS Continued from page 9

Are we Radio Amateurs competing with each other on basis of our merits?? Or is it who has most money to put most stations under one roof with most operators??

The USSR stations, as always, did a fantastic job as multiops in the contest. But they don't have the money or the computers available to use a number of completely manned stations at the same time, with coordinated (or uncoordinated) transmitting times.

In my view, I believe that under the rules as published in CQ Magazine by Roy GOULD, KT1N, such practice is not only un- sportsmanlike, but also com pletely unethical.

And lots of serious operators, specially internationally, read the rules in CQ Magazine, so they had no chance to compete on the same basis, or "in the same Contest".

I hope the awards committee closely scrutinizes this matter.

And possibly, next year, we should have three categories: single op; multi op, single transmitter and multiop, multi transmitter.

And better get off my bandwagon, but this is worth some of my time. I operated single operator this year, but I still feel just as strongly about it.

CHIAO

Guess I have used up my space with my griping. By the time you receive this, we will be well headed to winter. And the bands should be a little better on long path and East West propagation. Go get all those goodies lurking in the QRM and QRN. Maybe a few on 40 and 80 in winter. Most of us, in spite of often poor propagation, have made great strides toward WAZ, or your other favorite Award this summer. I even "was untrue to you" and completed my 5 Band WAZ on SSB.

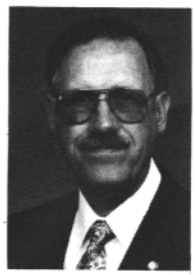
And KB2VO had his wonderful expedition to TG and HC land for a month, but unfortunately it went to his head, so he lost control of his car,(once back home) and drove into a concrete divider: broken breastbone, but well healing.

This column would not have been possible this month without the help of such as OD5NG, VK2SG, KB2VO, W2JGR, VU2JX, I5FLN, W6/GOAZT, W9CD and of course DJ6JC: plus my MS Word and it's Spelling Checker.

The weekly, up-to-date DX News is in my new APLINK MSO on 14,074. The new box works great on an R-5 Vertical and accesses easily: it even can give you tips as to how to improve the hearing ability of your PK232, for two dollars. By the time this issue reaches you, the box will be up 24 hours a day: thunderstorms will have stopped here.

God bless you all: comments on my columns are welcome, though sometimes only nominally so: Hi.

73 and Good DX de John, TG9VT



MSO'S

Dick Uhrmacher, K0VKH
212 48th ST
Rapid City, SD
57702

AUTUMN IS UPON US

Hi Gang! Where has the Summer gone? Seems just like yesterday that I was outside planting my garden, and now I'm out there ripping it up after ol' Jack Frost did his job! And, it's time for all of us to think about sprucing up our outside projects, such as guy wires, antennas, etc., before it's 20 degrees below zero.

MSO activity is picking up a bit after the Summer doldrums, and we see more activity every day. Band conditions have not been the best, especially when you consider where we are in the current sun spot cycle. In fact, conditions in the past couple of weeks have been downright poor, with lots of QSB, QRN and missed letters. Hopefully things will pick up soon.

MR. LIGHTNING BOLT STRIKES AGAIN!

I'm sorry to report that Clark, W9CD, of Urbana, IL had an unwelcome visit from Mr. Lightning Bolt recently. Although evidently not a direct hit, it was close enough to fry his AEA PK-232 TNC, his Kenwood TS-940S and a TV set in the family room. Clark has maintained his MSO on the National Autostart Frequency, with a standby Ten Tec OMNI-A transceiver, a faithful servant for many years. Clark hopes to be back on AMTOR as well, as soon as his equipment is repaired.

PK-232 RTTY MODS

W9CD, TG9VT and OD5NG, have all recently modified their AEA PK-232's to reduce digital noise within the unit. It appears that a significant reduction in this digital noise can be attained, by the simple addition of a few capacitors to the circuit board. All of the three stations above speak highly of the results of this modification, which includes the ability to copy RTTY signals that were covered by the digital noise, the ability to link on AMTOR mode to stations that were not possible in the past, and overall better performance of the TNC. The modification information is currently available on the WB0ICL MSO, on the NAF (14 085 625 Mark frequency).

BEACONS RE-VISITED

I'm happy to report that there has been some diminishing of RTTY CBMS (computer based mailbox systems) beacon activity on 20 Meters. And a welcome relief it is! There has been quite a bit of hard feelings, disgust and recriminations concerning beacon activity, all of which we do not need within the Amateur fraternity. Beacons, plain and simple, routinely interfere with established communications. It certainly is the right of any Amateur Radio operator to advertise the presence of his/her CBMS on a particular frequency. However, when an unattended beacon is allowed to operate on a specific frequency, you can be sure that it will certainly interfere with already established communications on that frequency.

It's not easy to start up a new CBMS on a frequency, and expect lots of new users to flock to it. When a person invests the time, money and expertise to establishing an automated service, he'd like to see others partake in its operation. However, there's no surer way to discourage use of a CBMS, be the brunt of a lot of criticism, and learn a lot of new four-letter words, than to have your CBMS beacon activated so that it clobbers someone's DX QSO!

At the risk of catching a lot of flak from all directions, I might suggest that operators who may be considering starting up a new CBMS think about joining an already established MSO or CBMS operation. It's nice to be independent, and have "your frequency" all to yourself, but with increasing use of the various digital modes, "frequency sharing" is almost a necessity. The phone guys want their segment, the CW ops want theirs, RTTY, AMTOR, Slow Scan, Packet, etc., all want to divide up our limited resources for their particular interests, and quite frankly, there just isn't enough spectrum out there for everyone to have his own little "private" niche.

The NAF (National Autostart Frequency) has for over ten years had multiple MSO's and CBMS's parked on its frequency. There are at times some conflicts with more than one system up and running at the same time, but these conflicts are very few in nature, and are usually caused by propagation conditions when one remote user cannot (or does not) hear another system being utilized. Cooperation reigns supreme on this frequency, and demonstrates quite vividly that multiple users can use the same frequency without causing undue interference. I hasten to point out that beacons have never been condoned on the NAF, yet the word seems to get around quite quickly when a new MSO/CBMS arrives on the scene, negating entirely the need to advertise its presence. So in finality, think about joining one of the established MSO/CBMS frequencies before starting out on your own. The spectrum is crowded already. and we need to cooperate in conserving what we have!

MSO MAILBAG

I received a very nice letter from Eric Simpson, VK3KSE, telling me about his interest in the digital modes, his station equipment, and monitoring of the NAF from Australia. Eric's letter must have gone via the "Slow Boat to China", as it was mailed in June, and I didn't receive it until August! Hi! And Eric, I'll drop you a line in the mail soon with a copy of that Log program you were interested in. Eric's activities include RTTY, CW and Packet radio, and he's presently hoping to pass his CW code test to upgrade his license. Good Luck on the test Eric, and I hope to see you on the MSO's soon.

NAF MSO LISTING:

Recently I've had several requests to list the various MSO/CBMS stations on the National Autostart Frequency, so here goes:

"**Mark**" frequency is - 14 085 625 Hertz
"**Carrier**" frequency is - 14 087 750 Hertz

Active MSO's

ACCESS CODE	QTH	SYS OPR
MSOICL	Yellow Springs, OH	Gaylord
MSOJIB	Yellow Springs, OH	Louise
MSOVKH	Rapid City, SD	Dick
MSOKOZ	Boca Raton, FL	Frank
MSO9CD	Urbana,IL	Clark
MSOAPI	Meriden, CT	Al
MSOZRR	San Luis Obispo, CA	Ernie
MSO5FL	Denton, TX	Brownie
MSOJRQ	Glenwood, IL	Larry
MSOQXK	Kaufman, TX	Don
MSOUOL	Bethel, CT	Bob

That's it for this month Gang! 73

de Dick, K0VKH

AMTOR

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

Hello folks. If you thought that you had seen the last of my "mug" shot at the top of this page, wrong, I am back, with a vengeance.

First of all, I need to know which letter "N" on the front page of the July/August issue has to be replaced with the "M" on the back page of the September issue? (sorry Dale!)

MAILBOX and COMMENTS

My thanks to Bill Henry, K9GWT, of HAL Communications, for a very nice letter concerning CCIR 476 and CCIR 625, (AMTOR protocol). Bill states that CCIR 625 has finally recognized a "hole" in the FEC specifications and recommends a minimum of 16 idle pairs at the beginning of an FEC transmission and at least 4 idle pair after every 100 characters. As Bill says, "this is a step in the right direction, but by no means far enough", and I for one, totally agree. This is NOT a commercial for a particular program or TNC manufacturer.

HAL Communication's FEC format begins the transmission with 32 idle pairs, 8 pairs after every forty (40) characters, 8 pair after every CR/LF and idles are inserted whenever the TX buffer empties. The above may seem like an "over-kill" with regards to the number of idles BUT it does ensure that the listening station has a chance to re-sync every 40 characters (6 seconds).

I would like to hear from the other manufacturer's software designers, particularly AEA, Kantronics and MFJ, as to their thoughts and deeds for implementing CCIR 625 or improving on it. After all, there is room for improvement in any recommendation laid down. The bare essentials are fine but maybe some of the programmers need to be "on the air", to really discover some of the pit falls of their hard work.

My thanks to the "Most Noble", Bob, WB7QWG/9, of the Oh-Wa-Ta Society, for a note explaining his APLINK AMTOR scanning multiple bands/frequencies setup. Bob's system uses an ICON IC-735 and a PK-232 with a 6 band vertical. The scanning setup was designed by Hank, K9LZJ. The scanning system monitors the PK-232 and when it is in the STANDBY mode, it triggers a timer and relay which in turn, activates the "memory up" button on the IC-735.

Bob says the system works well but there is room for improvement, (isn't there always, hi) and he is considering adding another timer into the circuit which will keep the radio on the last frequency "used", for an additional minute, after the system returns to "standby". This will help weak links who "drop out" of the system, to re-establish a link and will also enable another station to access the system before it goes though it's QSY routine. From my experience in trying to access Bob's system, I think his plans are a must!

Mark frequencies being scanned at the moment are: 14.071.5, 14.073.5. 7072.5, 21.071.5, 28.071.5. At present, a complete rotation takes less than one minute, so it is advisable to extend your ARQ "time out" to about 70 seconds or more. If more frequencies are added then naturally the rotation time will be longer.

BO DIDDLEY (Baudot Sync)

I strongly urge any DX station who uses the AEA PK-232, to invest in the latest firmware upgrade, as described by the Connections Columnist, W6OXP, in the April, 1989 Journal.

The new upgrade (30-Dec-88), includes, amongst a few Packet upgrades, the ability to have synchronous idle or "diddle" in Baudot, during periods of no text being sent. This facility is ESSENTIAL for good copy and less alphabet soup when the keyboard operator stops sending text, while he/she finds the right keys and correct spelling.

APLINK

A great AMTOR Mailbox program, (NO BEACON), written by Vic Poor, W5SMM and being used by at least, 24 Hams around the world. The system takes a bit of getting used to. It has very short, two letter commands which save time, once you get the hang of it.

One of the procedures that is "alien" to an Amtorite like me, is the changer-over sequence. The normal way to change over control to the other station is the recognized use of the symbols: +? (User control). In the case of APLINK, you are requested NOT to use the +? but to send your command and end with a CR/LF. (System control). WHY?

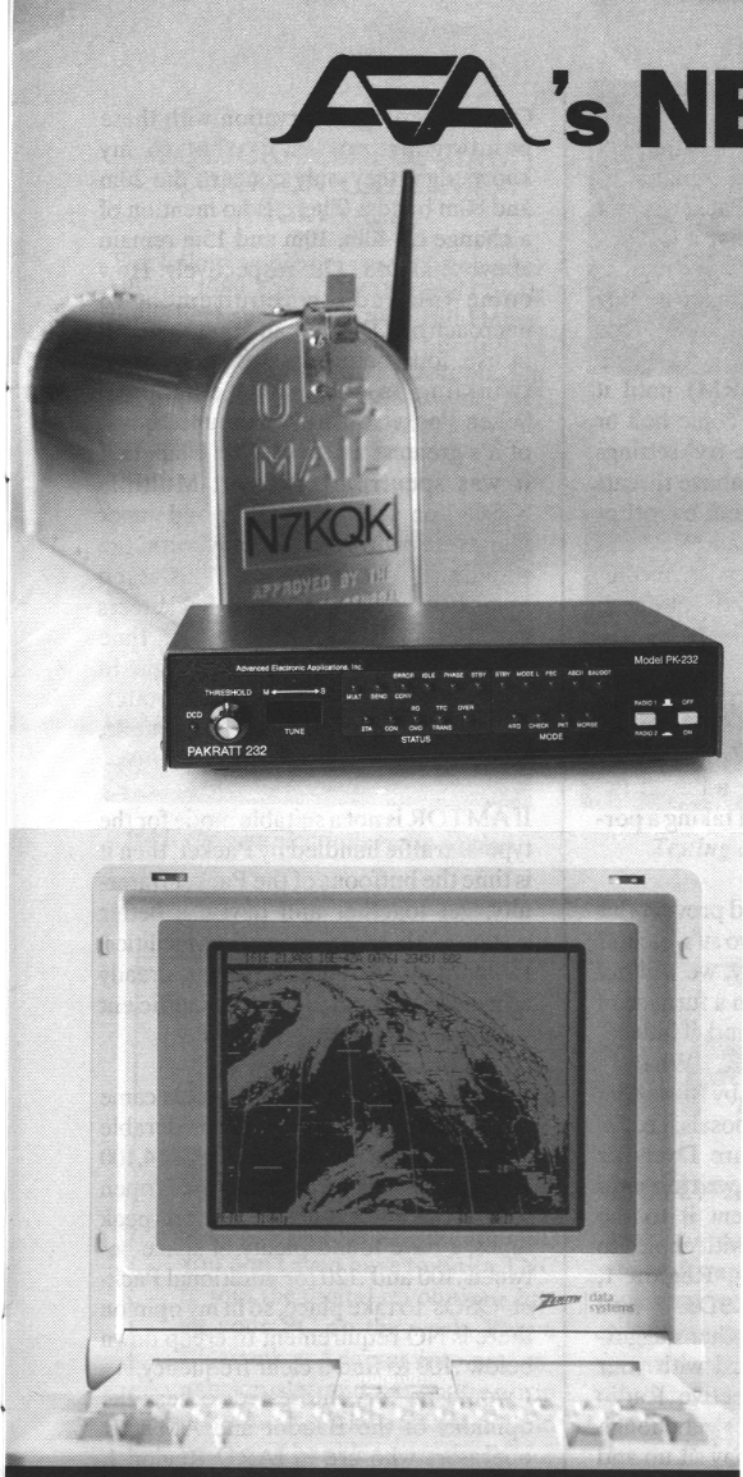
My experience with accessing the APLINK system, causes me all sorts of problems and comments from the system like, "You need help" or "If you need help, type HELP". (Maybe I DO need help, I keep hearing these funny chirping noises!). Me being as thick as two short planks, it took a while to figure out why the darn system kept coming back with "?? GA +?".

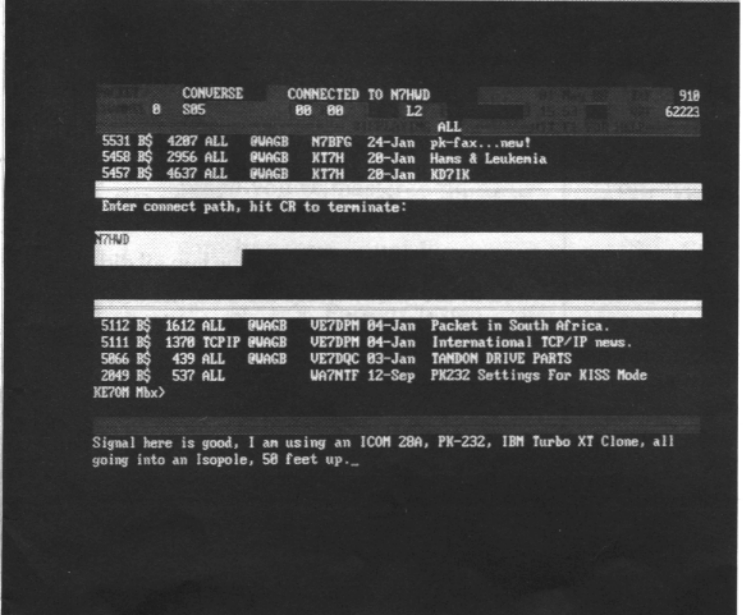
You see, I am a great believer in sending a couple of CR/LF's BEFORE I begin any text, whether I am on Baudot or AMTOR. The reason behind this so called "habit", is simple. It shifts the previous text on the receive screen, up two lines, thereby allowing the receive station to "spot" the new incoming text without having to re-read some of the old stuff, twice. Using the digital modes is much like writing a letter on note paper. You need to split up the text with the odd paragraph or CR/LF now and again. Don't over do the CR/LSFs though, especially in my case, because I am usually in the "head down" position, trying to lesson my spelling errors! Too many CR/LFs and your text will have scrolled off the screen before it can be read.

Oh, I digress, back to APLINK and

Continued on page 20

AEA's NEW PK-232MBX With PakMail™





Now AEA's popular PK-232MBX multi-mode data controller has all of the features you've been asking for...PakMail™ mailbox with third-party traffic, seven-character AMTOR sel-call, TDM (Time Division Multiplexing) Rx for SWL and priority acknowledgment features. Compatible with almost every computer or data terminal, you can enjoy the full spectrum of digital communications with the PK-232MBX.

All Operational Modes. The PK-232MBX includes all of the **recognized** data modes available today... AMTOR, ASCII, Baudot, CW, FAX Tx and Rx, NAVTEX marine and packet.

Modem Superiority. An eight-pole chebyshev bandpass filter limiter-discriminator modem enhances the signal-to-noise ratio at the detector and virtually eliminates interference from adjacent signals. This system is superior to PLL modem technology which was designed for minimal noise interference.

PakMail.™ PakMail™ mailbox with third-party traffic is now a standard feature. Leave and retrieve packet messages around the clock. The PakMail™ plug-in board/update is compatible with all PK-232's. Contact factory for details. The upgrade also includes TDM (Time Division Multiplexing) decoding and seven-character AMTOR sel-call. Priority acknowledgment is also included to reduce packet collisions.

FAX Transmission. The **first** multi-mode TNC to transmit FAX, the PK-232/MBX supports the widest range of printers using the optional RS-232/printer cable.

Host Mode. Only AEA provides a fully functional Host Mode which enables programs to control the TNC more efficiently. Programs include PC-Pakratt with FAX for IBM PC and compatible computers, COM-Pakratt with FAX for the Commodore 64 and 128, and now MacRATT with FAX for the Macintosh.

Two Radio Ports. Independent radio connection ports allow interchangeable HF or VHF operation, selectable from the front panel for convenience.

Signal Anaylsis. The PK-232MBX internal software has the exclusive SIAM™ (Signal Identification and Aquisition Mode) feature which lets you tune an unidentified signal. The PK-232MBX can automatically determine the signal's mode, baud rate or speed and configuration.

You Deserve the Original. AEA was the first to produce a multi-mode TNC, and it still remains the standard by which all other TNC's are compared. Don't settle for less.

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206-775-7373

AMTOR Continued from page 18

CR/LF. Well by now, you may have guessed what had been happening when I tried to "talk" to the system? The two CR/LFs that I always send, before any text, were confusing the software into thinking that I had given a command and the system read the CR/LF as a sequence changeover, but did not read anything else, so it threw it back at me, only to get more confused when I sent another CR/LF before the next command.

I can understand the need to use a CR/LF to indicate a sort of a "change over" for Baudot RBBS software because in that mode, there is no Internationally recognized method of indicating "end of message", why change a proven and well understood method of ARQ sequence changeover codes, (+?), to something totally different? CR/LF is not positive enough in ARQ.

One observation I have noticed with the system control method, is that the software tends to take longer to recognize the CR/LF. As I like to "type ahead" because I can only hunt and peck, I usually begin my message straight after the "change over", only to find that my text is being included in the previous command I gave the system, and I get another one of those "do you need help?" messages. Anyone else having these problems, or is it just me? Lets have some comments please, and I only wish I could have made it to Dayton to talk to Vic Poor.

IARU REGION Proposals

The IARU Region 1, according to a letter in the ARRL Packet Newsletter, Gateway, proposes to change the 20 m and 80m sub- bands and recommend that Packet Radio use 3.590-3600mhz and 14.089-14.100 Mhz. Region 1 covers Africa, Europe, the Middle East, Mongolia and the USSR. That is a BIG chunk of the world ham population!

Outside the Journal subscribers and the odd person who just happens to over hear these proposals, I wonder how many Baudot types, really know or understand the implications and effect this proposal will have on the premier, worldwide, 20m DX band?? Imagine what the influx of kilowatt "Braaps" will do to that rare DX station's signal or to a couple of ragchewers. Packet is not very selective in who or what it QRMs. Give it a second or less of clear frequency, and off it goes, just as you are getting your RST from that ZA on Baudot! Due to it's operating methods, Packet will continue to interrupt (QRM) until it gets its message through, come hell or high water, or until it's "re-try" settings expire. Comments on the above threats have already been voiced by other columnists in this Journal, and VK2EG, alias DX 1, has been collecting further comments from concerned RTTYers and other spectrum users.

There have been counter proposals by some well known and devoted RTTYers, as well as CW and Phone operators. Some say, take a bit off the phone band, others suggest taking a portion of the CW band.

What can be done to try and prevent this "take-over" of part of the two sub-bands? In my opinion, individually, we will not stand a snowballs change in a furnace of getting the proposals changed, if indeed, they are in the "pipe-line'? What IS needed is an all out effort by those that will be affected by the proposals, i.e. All RTTYers, whether they are Dxers or rag-chewers, to form a written and signed petition and present it to the IARU President, W1RU, with copies to the Regional secretaries, Region 1, G3FKM, Region 1, HK3DEU and Region 3, JM1UXU. Another suggestion is to send a QSL card with your comments, to your respective Radio Society area director. If they get enough mail on the subject, they may sit up and take notice! Remember the proposal by one ARRL area director who wanted to extend the 40m SSB sub-band to 7.075 early in 1988? Well, that proposal sank to the bottom of the ocean, mainly due to concerned RTTYers voicing their opinions and letting the ARRL know what they thought!

This new proposal is more serious and comes from the "big guns", so lets get together and "Digitum Extractum", pronto!

One interesting observation with these pending proposals, is that to my knowledge, they only concern the 20m and 80m bands. There is no mention of a change on 40m. 10m and 15m remain above .100 and .120, respectively. How come the sudden requirement to encroach on DX sub-band that has been in use, long before Packet radio was a twinkling in someone's computer. When Packet was first announced, one of it's greatest assets was the claim that it was spectrum efficient. Multiple "QSOs" on ONE frequency and super fast traffic flow. Obviously with the popularity of HF Packet, this is no longer the case, and some Packeteers are getting frustrated with the time taken to get their traffic through. In those cases, may I suggest a far better, albeit slower but more accurate mode, called AMTOR.

If AMTOR is not a suitable mode for the type of traffic handled by Packet, then it is time the buffoons of the Packet fraternity, get together and devise a better system with error correcting facilities, rather than try to gain more of an already crowded DX band, due to the inefficient nature of HF Packet!

Since the news of these proposals came out in June, I have spent a considerable amount of time monitoring above 14.100 for Packet activity when the band is open to IARU Region 1 areas. Even at peak times, I have found plenty of space between .100 and .120 for additional Packet "QSOs' to take place, so in my opinion there is NO requirement to creep down below .100 to find a clear frequency.
I would be very interested to hear the opinions of the Baudot and AMTOR operators who are in IARU Region 1. Please drop me a note, with your comments, into any of the following BBSSs: AMTOR: TG9VT (14.074 Mark) or VK2AGE (14.075 Mark). Baudot; WB8ICL/WB8JIB (14.085.6 Mark). You might like to also add to VK2EG, Syd's file on the subject, via VK2AGE.

Thats it for this month, I hope you all did well in the CQWW/RTTY Journal contest, band conditions were fantastic! See you in the W.A.E. this month.
73 GL and DX

de Eddie, W6/GOAZT

A QUICK TOUR OF HAL COMMUNICATIONS URBANA. IL

The following pictures were taken after Dayton 1989. Cole, W6OXP and I (your Publisher) spent a day with Bill Henry, K9GWT talking about the digital modes, touring the HAL plant, playing with the nice station equipment, and generally enjoying Bill's hospitality. It was a fun day for both of us.

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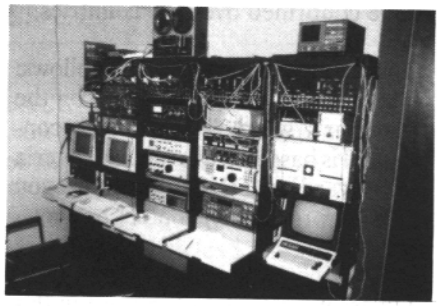
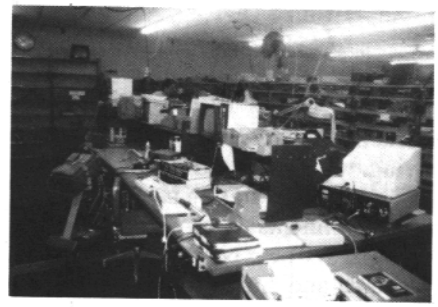


HAL Communications radio station



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RTTY JOURNAL AWARDS PROGRAM

The following Awards are sponsored by the RTTY Journal: DXCC, WAZ, WAS and WAC. To make a claim for any of these Awards, all pertinent data to fulfill the requirements outlined below should be forwarded to the RTTY Journal Awards Manager.

Betsy Townsend, WV7Y
POB 644 Spokane, WA
99210-0644 USA

The fee for all Awards is $5.00 US. However, all subscribers to the RTTY Journal are exempt from this charge.

DXCC

This Award is available to all licensed Amateurs and Short Wave Listeners (SWL) upon submitting satisfactory proof of having worked/heard a minimum of 100 different countries using RTTY as the mode of communication. There are also endorsements for AMTOR, Packet and other digital modes. All endorsements are available for single band or all band operation with endorsements available in segments of 25 from 100 to 200 and from 200 up in segments of 10 increments. The ARRL Countries List is used as the criterion for the determination of the status of a country. To apply for endorsement stickers only, send only an S.A.S.E.

WAZ

The WAZ Award is available on the same basis as the DXCC for having worked/heard at least one Amateur RTTY station in each of the 40 CQ magazine zones. This Award can also be endorsed for other digital modes as appropriate on single or all band operation.

WAS

Worked all states is available to all licensed Amateurs and Short Wave Listeners (SWL) upon submission of proof of having worked/heard a RTTY Amateur station in each of the Fifty (50) states of the USA. The Award is endorsable for single or all band operation and all digital modes.

WAC

Worked all continents is available for having worked/heard at lease one RTTY Amateur station in each of the six (6) continents of the world; Africa, Asia, Europe, North America, Oceania, and South America. This Award can be endorsed mixed or single band operation and in the different digital modes listed above.

VERIFICATION

The following methods of verification are presently acceptable: BARTG (Awards Mgr.), SARTG (Awards Mgr.), JARL (National verification committee), CQ magazine (Awards Mgr.) ARRL (Awards Mgr.), and the RTTY Journal (Awards Mgr.) Under no circumstances will photo copies of cards or other awards be accepted as proof by the RTTY Journal Awards Manager. Contest verifiable awards programs remain in force for the BARTG and CQ/RTTY Journal Fall contests as has been the policy in the past.

All inquiries for information regarding the RTTY Journal awards program should be directed to the office of the RTTY Journal Awards manager for prompt processing.

DXPEDITION OF THE YEAR

Entries for this Award must be submitted before December 31 of each year in order to qualify. The winner will be announced at the RTTY Dinner in Dayton the following April.

DXCC RESULTS

As promised I have compiled a listing of the top RTTY DXCC scores. This listing is from information submitted by readers as well as my DXCC Awards file.

If you want your score included or changed, please drop me a line. There were an incredible number of applicants sitting at 100 confirmed, so I didn't include them. In fairness to all I will add Hams to the list who have confirmed over 100 countries.

The rules for updating are as follows: The number worked is based on the amateur's word. The number confirmed is based on the regular criteria for awarding DXCC; namely, you have to prove each contact by showing a card.

Unless we get a lot of interest in this listing, we will only print it every six months. **de Betsy, WV7Y**

Call	Confirmed	worked
TG9VT	234	246
I5WT	226	
I8AA	225	
I5FLN	220	
W3KV	210	
K7BV	210	
ON4BX	200	
W2LFL	200	
JA1DSI	200	
W0HAH	200	
W6JOX	164	
F5JA	160	
WS7I	151	
W3FV	150	
W8JIN	150	
W1GKJ	150	
ON4CK	150	
WA3IKK	150	
W3DJZ	150	
K6WZ	147	
G6JF	140	
JR2PAU	137	
AB0Y/4	135	145
W5QCH	130	
JR6AG	130	
JA3BN	128	
K0BJ	120	
DK1BX	120	
DU1AUJ	118	
ZL2AKI	117	
JA2NNF	113	
W4CQI	110	

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First 30 words $5.00, additional words 5 cents each. Cash with ad. Deadline for ads is 1st of month of publication. (Example - Ad arrives by 1st of Septmeber will be run in the September issue)

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BACK ISSUES -- A duplicate of any back issue of the RTTY Journal may be obtained from Red Wilson, WB0ESF 4011 Clearview Dr, Cedar Falls, IA 50613, $1.50 PPD & SASE. Reprints of both UART articles $2.00 PPD.

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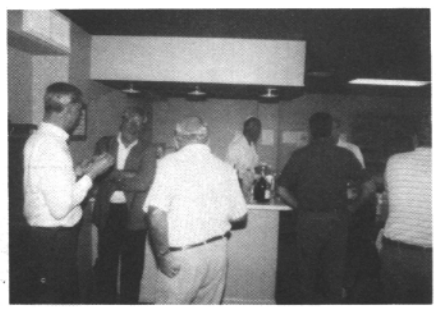

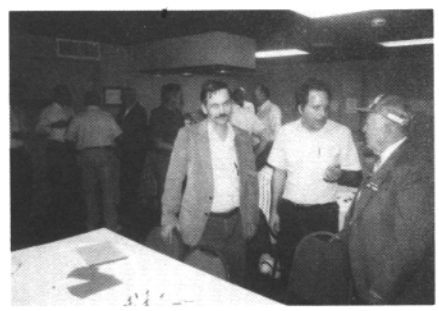

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