RTTY JOURNAL

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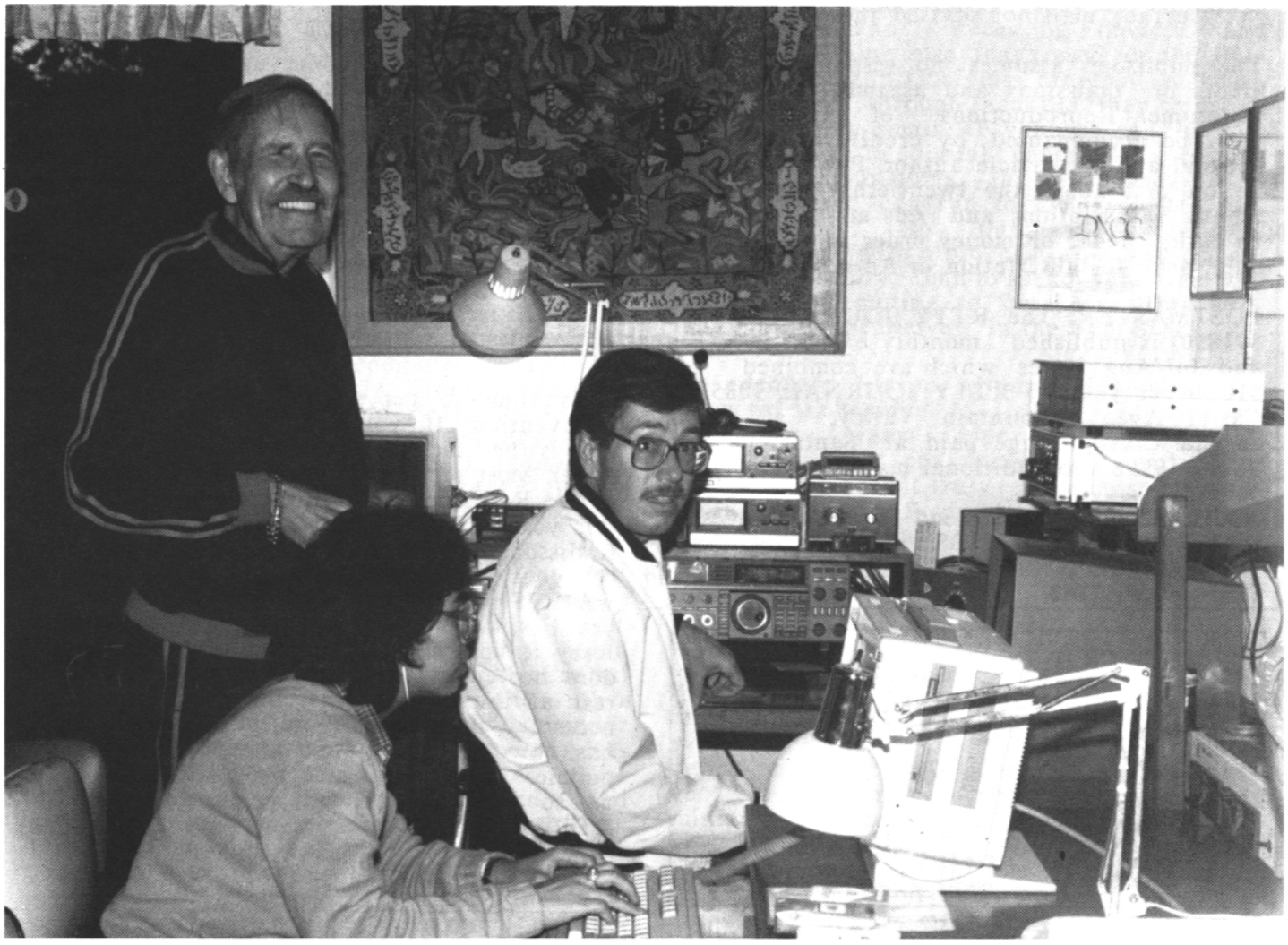

L. to R. John Troost, TG9VT, Maggy Coffey doing the logging and Steven, TG9AWS working another multiplier I would guess. See "Picture Story" page 6 and pix pgs. 4 & 6.

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RTTY JOURNAL

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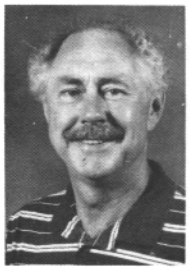

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92708

HITS & MISSES

I received a nice letter from Ken Miller, K6IR/3 wherein he related that he has just returned from a month long trip to the far East. He bumped into Don Miller, W9NTP while visiting with Tim Chen, BV2B in Taipei, Tiawan (see picture on page 6). Ken tells that Tim is running a TS930 and TH7 antenna but didn't mention if Tim was on RTTY yet. Tim was also mentioned last month in the DX NEWS column. Ken has been very busy DX wise; last year he worked 278 countries on 10/15 and 20 Meters. To start off this year Ken has been elected to the office of President of the National Capital DX Association. Congratulations to Ken on both counts. Maybe Ken will convert some SSB Hams of the DX association over to RTTY this year. Ken also had some nice words to say about the Journal which I most appreciate.

James Stanicek, AG3Y has a mint condition model 37 machine he would like to give to someone. It has a 7 level tape puncher and reader and he also has schematics but no manuals. If you are interested in this fine machine, contact Jim at: 1028 Corbett St., Hagerstown, Maryland 21740, (301) 790-3720.

Dee Crumpton, N6ELP, prior owner of the Journal, is now back home again from her trip along with husband John. They spent most of 1987 and some of 1986 touring throughout the USA. They visited 38 states, 5 Provinces and Mexico. Dee says she has many pictures from their trip and one of these days I hope to see them. They were unable to do much hamming on the trip due to various problems along the way. Thanks for the nice note Dee and glad to hear your trip was a really enjoyable one.

RTTY DINNER - DAYTON

It is time to get serious about the Dayton Hamvention. If you are planning on going, now is the time to make your reservations for a Hotel. Most of the digital gang will be staying at the Radisson Inn on Neadmore Rd. Again this year a RTTY dinner will be held at the Radisson, and if you plan to attend you must get your reservation off to Jerry Trichter, WA1IUF immediately (see MSO column). This year it will be necessary to forward $15.00 to Jerry to hold your dinner reservation. If that does not cover the cost, Jerry will collect the rest at the dinner. In the past it was not necessary to make this collection but the Hotel has now changed hands and they have new policies. Jerry has a nice program outlined for us, so why not spend an evening with the RTTY gang. **(cont. pg. 6)**

ABOUT THE FRONT COVER

John Troost has a world class station by all standards. He also has a very busy station. John likes to chase DX, operates a DX MSO, is an avid Contester, and I have heard him rag chewing at times as well. His station packs a great signal in all directions. We are proud to feature John on the front cover this month as an outstanding RTTY operator.

Dick Uhrmacher
K0VKH
212 48th ST
Cedar Rapids, SD.
57702

MSO'S

Hi Gang! Winter is here, that's for sure, with sub-zero temperatures turning rotor grease to lead! Over the years I've found that a product called "Lubriplate" keeps a constant viscosity during both high and low temperatures. "Telex", (who now owns both HY-GAIN and CDR), reminds us that only a very small amount of lubricant (grease) is needed in their line of rotors, and over-lubricating them actually does more harm than good. One tablespoon of a good quality grease is plenty for the bearing cage in the typical "CDR" type rotor.

RFI IN THE HAM SHACK

In this day of the "microprocessor", it seems that almost every item imaginable has some kind of "CPU" in it, from the latest Kenwood transceiver, to Mom's new sewing machine. The advantage of the computer controlled appliance are obvious, from increased operating features, to wide flexibility in use. However, there are some drawbacks when these devices are used in a high energy RF field, (like your Ham Shack), and I'd like to explore a few of them with you.

The computer based device actually presents at least two problem areas which must be considered when it is used in the Ham Shack. The very nature of miniaturized, high speed digital circuitry, with it's internal Central Processing Unit, (CPU), clocks and other switching devices, cause it to emit "computer noise" throughout the spectrum. Some devices are better than others, although even those which are specifically designed and manufactured to operate in proximity to sensitive receiving systems, do emit some of this noise, and it can be a difficult problem to overcome. This is especially true in the case of the Radio Amateur, who because of the high cost of the more sophisticated systems, must be satisfied with equipment more susceptible to emitting this noise.

The Second problem that occurs when using computer based equipment in the Ham Shack, is the susceptibility of the computer equipment to "crash" from "RF" from the station transmitter. Nothing is more frustrating than to finally spot that rare DX station you've been chasing for months, only to have your computer based RTTY rig crash, or go off and "do it's own thing"!!

Solving these problems is not an easy task, and each particular case has it's own cure. It really takes a lot of good planning when you are thinking about adding a computer based device to your Shack, with the goal of minimizing both "computer noise", and computer "crashes". For example, there is absolutely no substitute for a good metal enclosure (case) on your computer! This is not only true of computers, but Packet Controllers, Video Monitors, Transmitting and Receiving devices, and nearly everything else that's used in the Ham Shack. Plastic and fiberglass are great on boats, but RF speeds through them like they were not there, and very small RF voltages can imitate valid signals in digital equipment, causing system malfunctions. In most cases, it is cheaper in the long run to spend just a few more dollars to purchase equipment manufactured with a bit of fore-thought about RFI susceptibility, than to spend your time and dollars in attempting to "cure" problems once they present themselves in the Ham Shack.

An adequate "station ground" is a must! Too often we are tempted to tie a ground wire to a convenient water pipe, AC receptacle grounding point, etc., without any real effort to make sure that it truly represents "ground". Many computer/RF problems can be totally eliminated by insuring that "ground is really ground", and that you have each piece of equipment in the Shack tied to it.

Eliminating excessive "RF" in the Ham Shack of course will help in minimizing computer interference. RF couplers, SWR bridges, antenna tuners, antenna switches, and most every other device in the RF transmitting system are suspect. Again, metal cases and good RF grounding techniques will help in minimizing interference. And, for those of you who pursue 'long wave' communications, (75 meters and down), it is very important to feed long-wire, and other non-resonant type antennas, with coaxial cable, as its inherent shielding capabilities will help in keeping RF voltages down in the Shack. Resonant antenna are preferable in most cases, with baluns at the antenna, to preclude RF from traveling down the coax shield into your Ham Shack. The farther the radiating element is from the Shack, the less RF to contend with.

(cont. pg. 4)

(MSO's cont. from pg. 3)

Finally, never ever "bundle" wires, cables, and coax together! It sure makes for a good looking shack, but it invites disaster in the RFI department.

RTTY DINNER, DURING 1988 DAYTON HAMVENTION

Once again during the 1988 Dayton Hamvention, the annual "RTTY Dinner" will take place on Saturday evening, April 30, 1988 at 1900 hours. It will again be held at the "The Radisson Inn Dayton" (old "Imperial House North"), which is located on the north-east corner of Needmore Road, and I-75, in North Dayton. This years gala event will be hosted by "The International Mailbox Frequency" gang, (Jerry Trichter, WA1IUF leading the pack), and it promises to be bigger and better than ever. Several of our DX friends will be attending this year, and we hope that YOU can attend!

With the change in management at the "Radisson", different reservation procedures are necessary. The total dinner reservations must be arranged for prior to the actual dinner, and all meals contracted for in advance must be paid for, even though the person(s) may not attend. Consequently it is necessary for those desiring to attend to not only register in advance, but also send $15.00 per person to : **Jerry Trichter, WA1IUF, 136 Alden Ave., New Haven,CT. 06515.** If additional meal costs are encountered, the difference will be collected at the RTTY dinner. As in years past, a list of those attending will be kept in the WA1IUF, K0VKH and K4KOZ MSO's.

TECH TIP OF THE MONTH

Frank, K4KOZ, Boca Raton, Florida, reports that the AT-9409S, Automatic Antenna Tuner, in his TS-940S, developed a problem recently, where it would "tune" continuously, without ever finding a good antenna "match". Prior to sending it off to the factory for repair, Frank opened the unit up and discovered that the "shaft couplings" were loose, allowing the tuning motors to turn, but the tuning capacitors to remain idle. Tightening the shaft couplers eliminated the problem.

MSO RAMBLINGS

For the many stations who are trying to contact Clark,W9CD, on the National Autostart Frequency, he is now maintaining a HF Packet system on 30 Meters. Clark tells me that he will once again have his MSO active on 20 meters when he obtains a crystal for a second transmitter. --- Don Kieffer, W5QXK, has now returned to full time MSO duty on the National Autostart Frequency, after his disastrous lightning strike this past Summer. Don is running a IBM clone, utilizing the popular W9CD MSO Program. --- The K0VKH MSO will be inactive for a three week period in early February, as I travel to sunny Florida to spend some time painting my Mother's home.

That's it for this month Gang. Can Spring be far off?? Best 73 **de Dick, K0VKH**

Jules, W2JGR at TG9VT with logger Edith

L. to R. John troost, TG9VT, Maggy Coffey doing the logging and Steven, TG9AWS working another multiplier I would guess.
(See story page 6 and pictures on pages 4 and 6)

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

CONNECTIONS

WE HAVE MAIL

Received a very nice letter from Gary ZL2AKI. He has a Commodore C64 with Hamtext software and soon expects to upgrade to a PK232 which is now becoming available in New Zealand. However, Gary says very little information on C64 programs is available in that part of the world and he relies on RTTY Journal to give him source information. Gary is interested in the AEA Com Pakratt program for the PK232 and C64. He thoughtfully included a Self Addressed Envelope and I will be sending him all the info I have on the Com Pakratt program and how it works with the C64. As I mentioned in the September and October CONNECTIONS columns, it works very well, making the marriage of the C64 and the PK232 about as perfect as is possible. Gary noted that it requires over two months for the RTTY Journal to get to New Zealand by surface mail, so he is sending in a subscription renewal for Air Mail this time.

Another helpful letter is from Tom, VE7VP, who has modified a Dow-Key coaxial relay to do a good job on AMTOR even with a kilowatt amplifier. His relay was originally the type with the spring operated shorting (grounding) contact on the relay receive port. This grounding contact increased the receiver isolation during transmit. However, as time goes on, the spring weakens and sometimes breaks. Even if it does not break, the transmit-to-receive time delay is large. When Tom's relay receive contact spring broke, he replaced the entire receive port with a new no-spring contact made from a coax connector. This works very well on AMTOR even at maximum skip to South Africa. Thank you, Tom, for the tip.

SOFTWARE UPDATES AND NEW PRODUCTS

Just received a Digipac II program update disk from Kalt Associates in Alaska. This is a free update that Kalt is sending to registered users of the Digipac program for all brands of TNCs used with the IBM PC computer or compatible clones. Updates like this are not inexpensive and it speaks well of this firm's dedication to service and customer satisfaction. I have not had the time to try the updated version as yet, but reading the documentation file informed me of several changes and improvements to the program. It has an excellent user interface, with help windows that pop up with the push of a key.

Kantronics has announced a software (PROM) update for their controller products that now permits FAX reception and printout. Can some proud Kantronics owner provide us with a review of this update?

And although last, but certainly not least (if the rumored price is true), is ICOM's announcement of the IC-781 HF transceiver. At long last, it is ICOM's first HF unit to provide 10 Hertz display resolution and the specs indicate it has a more flexible IF filtering arrangement than any previous ICOM radio. The major change though, is the CRT multifunction display which can tell you everything you wanted to know and maybe a few things you didn't want to know. The CRT display can simultaneously give you the frequencies of both VFO A and VFO B, the RIT offset, Mode, filter bandwidth, etc., and also provides the operator with a panoramic spectrum display of the adjacent frequencies. Oh yes, the price. Actually, you have a choice, between the IC-781 and a new sub-compact automobile. The price is the same. Now if I could win the California Lottery ....

AND OUR EPIC STUMBLES ON

The current status is as follows: No reply as yet to my letter to ICOM - Osaka on the lack of cross-documentation of NEC N88-Basic and Microsoft basic. This letter was mailed in October of 1987. I suppose I could try again and write the letter in Japanese this time, but I would just as soon not contribute to the Osaka Office's hilarity upon receiving it. I did receive the BASIC Language Learning Guide from NEC that was ordered last month and while it did explain several NEC BASIC statements that conflicted with Microsoft BASIC, it did not list or explain the "COLOR@(LY2,50)-(LY2,50),6" NEC BASIC statement. I think it has something to do with an ARRAY that stores the attributes of a character at a specified location on the CRT screen but that is as close as I have been able to come so far. However, not to give up, as there are several other approaches to this problem that are about to be tried. Tune in next month.

(cont. pg. 6)

(CONNECTIONS cont. from pg. 5)

Judging from some of the letters received in the past couple of months, I have lots of company (misery loves company you know) when it comes to vendor service and support problems.

Speaking of misery, this will be a short column this month. I have to bring up a Tax Program called TurboTax and try to get my tax return in early this year. Very 73.

de Cole, W6OXP

L. to R. Jules, W2JGR - John, TG9VT
Maggy Coffey - Mirna Abal

L. to R. Don Miller, W9NTP; Tim Chen, BV2B; Ken Miller, K6IR/3 - Don & Ken not related

(HITS & MISSES cont. from pg. 2)

HOSPITALITY ROOM AT DAYTON

We will again have a hospitality room at the Radisson Inn for the digital gang. Please plan on dropping in either Friday night or Saturday night. Friday night, the room will be open after seven and Saturday night, right after the RTTY dinner which will be about nine or nine-thirty. If you are coming to Dayton and plan on coming over to the hospitality room, please bring along something from home, such as, QSL cards, photos to share, letters from DX friends, etc. The hospitality room is a good place to share your past special events with all the RTTY gang. Come on by, I would like to meet you and take your picture.

PICTURE STORY

Back in the Dec. 87 issue of the Journal, Jules Freudlich, W2JGR wrote a nice letter to Roy Gould, KT1N, our DX NEWS columnist about his trip to John Troost's, TG9VT, home in Guatemala City. At the time we had no pictures for the article but now we do. You might want to refresh your memory of what Jules had to say while enjoying the great pictures we have of his trip (see pages 4 & 6). It appears they all had a great time operating during the CQ/RTTY Journal contest in September.

TECHNICAL ARTICLES

From time to time I receive letters asking for more technical articles in the Journal. I would be more than happy to publish more technical articles if I could get them. They are hard to come by, my friends! Todays new equipment is built better and just doesn't seem to have the bugs that yesteryear' gear did. Consequently, less trouble means less fixes for those troubles. At present we are on the mailing list of most of the manufacturers to receive their Service Bulletins but we just don't get very many. This is good news and bad news. It means simply means that the manufacturers are building a better mouse trap. When that happens, we the users have less trouble with the gear and this in turn means less Service Bulletins. Our CONNECTIONS column writer Cole, W6OXP is answering almost everything that comes to him and he is always on the lookout for more technical info. So, again, as we receive technical information, we pass it along as soon as possible to you.

That's it for this month. **de Dale, W6IWO**

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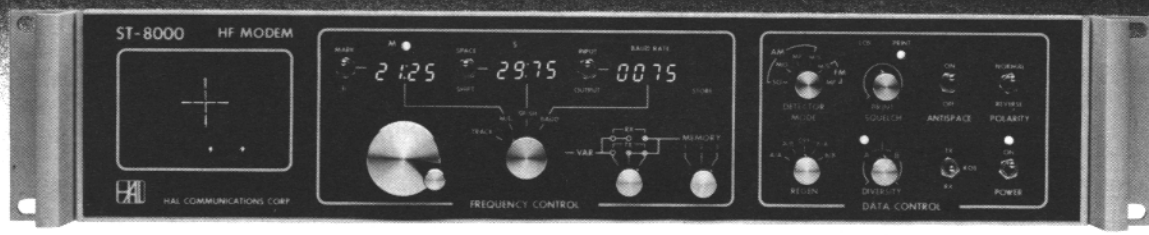

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- Variable Threshold Diversity
- RS-232 Remote Control I/O
- 100-130/200-250 VAC, 44-440 Hz
- AM or FM Signal Processing
- 32 steps of M/S filter BW
- Mark or Space-Only Detection
- Digital Multipath Correction
- FDX or HDX with Echo
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Roy Gould, KT1N
P.O. BOX DX
Stow, Ma. 01775

DX NEWS

This month's column is going to be a little short. I have a nice story from Dick, WA4WIP, who many of us call the "Wipper". Dick and Ron, KP2N traveled to Anguilla for the BARTG contest last year. There story follows.

DXER'S OF THE MONTH
WA4WIP & KP2N

VP2EDX - A QUICKIE MINI-RTTY DXPEDITION TO ANQUILLA

Having worked all of the DXCC countries except for 3Y0, Bouvet Island, I was looking for a new challenge about two and a half years ago, when I acquired a computer - a Commodore 64. All of a sudden it dawned on me that a new mode of Amateur Radio might be opened to me - RTTY. So, I started to examine the terminal units that were on the market and liking what I saw about the Microlog AIR-1, I ordered one. When it arrived, I proceeded to read the instructions and after a short time, connected it to the C-64 and put is on the air. I was hooked! RTTY became a way of like for me thereafter and DXCC was my goal.

DXCC was acquired not to far down the logbook and I kept after the countries and finally ran my score to around 160. In obtaining this score, I found that there were several countries close to my Florida QTH that were rare or semi-rare. These were island countries in the Caribbean area. I needed them and so did a lot of other Hams.

Searching the bands on SSB, I came across Amateurs in some of these needed countries and asked if they had RTTY capabilities. Some did, some did not. Those that did, I tried to encourage to come up on the RTTY frequencies and to expose their country to the DXers there. Those that did not, I tried to make some arrangements to get equipment to them so that they could put their country on RTTY. Things were working out. Several stations in St.. Vincent, Dominica, St. Kitts, St. Lucia, Belize, and other areas responded and soon some of these amateurs were putting their "rare' country on the RTTY frequencies.

And wouldn't you just know! Someone had started *RTTY contests. The British Amateur Radio Teleprinter Group sponsored a contest in the month of March each year. The wheels started turning in my head and I thought it would be really great to be able to put RTTY from one of those Caribbean countries , on the air to the RTTY world. Which one would it be? St. Lucia, Turks and Caicos, St. kitts? I know - how about one of the smallest island countries in the world? Anguilla Island -VP2E?*

Having kept daily schedules with VP2EZ and J6LGH on 21340 at around 2100Z, I found out a little bit about the island and the possibilities of obtaining a license and putting RTTY on the air from there. Jerry White, VP2EZ, informed me that it could be done. Jerry is the only active Ham on Anquilla and is on the HF bands most of the time. No one was on with RTTY. So, I made the decision that this was the spot to go to. It was going to be a real chore for one person to go for the weekend and put on the type of effort that a contest requires. KP2N, Ron Hall and I had been discussing going to several of the islands in the first week of June and I thought, maybe Ron could get a long weekend off from work. So, I called up on 14.313 and Herb, KV4PZ, came back to me and I asked him if he could get Ron on the air which he did.

Telling him what I had in mind, I asked if he thought he could get a long weekend off the 20th of March to go down and work the contest. Without hesitation, he said "yes". (That is also a characteristic of a real DXer, Ready to go anytime).

ED: After much preparation, meeting schedules, handling all the equipment, meeting with Ron at St. Thomas, missing flights, finally arriving in Anquilla, going through Customs, and finally meeting with Jerry, VP2EZ the story continues.

Jerry had made accommodations for us at a guest house and we were to use rooms on the second floor overlooking a fairly large porch where we would install the vertical. After about ten minute ride, we arrived at Lloyd's Guest House and were shown our rooms. Since a guest was already in one of the upper rooms, we decided to use the one room for operating and sleep in the lower room. So, out came the Hustler vertical which we proceeded immediately to put together as per instructions. Went together really easy and we mounted it on a piece of 2 inch PVC pipe which I had found lying around the house. Radials were attached, coax hooked up, the TS430S, C-64, and AIR-1 connected, and the monitor turned on. Here we go! Nothing showed on the screen.

(cont. pg. 9)

(DX NEWS cont. from pg. 8)
We were using Ron's Sony TV and it wasn't functioning. So we quickly changed to the TV set which Jerry had let us borrow and found that it was working just great.

Finally at 2107Z on Friday, March 20, a few hours before the 0200Z time of contest start, we thought we would give out some contacts using the VP2EDX callsign Jerry had obtained for us. I2HEO came back to us with a very nice signal telling us that the vertical was working just fine. Then I5IPW replied and then our first stateside contact with our old friend W4JXM, Charlie in the bluegrass state of Kentucky. We were now ready for the contest.

You never know how you are going to get along with another DXer when you go on a DXpedition. I like to operate - Ron likes to operate - and since this was our first experience together, neither of us knew how we would handle the time. But, it worked out just great! When one of us was not sleeping, one would operate and the other would log. It worked out very well this way.

Anguilla was being put on the RTTY frequencies for the first time in quite a long spell and those that needed it for a new DXCC country were there ready for it. I can't say anything else exciting happened. All of the equipment worked smoothly and coolly and our signal seemed to be getting out very well to those parts of the world that needed us.

So it went; the 48 hours passed by quickly, and soon we were disassembling things for the trip back home again. Ron on his way back to St Thomas and me back to Sarasota, Fl. It was fast, fun, and we look forward to trying it again soon. Who knows - we may show up from VP5, V4, J6, J7, VP2, or wherever the spirit of DXing might lead us.

ED: Most of Dick's letter has been edited to fit the article. I hope I was able to portray the story in proper perspective.

SHORTLY NOTED

HK0BKX ... Well the ever elusive TYPO, once it hits it stays. As many of you know, in last months column Pacho's call is HK0BKX not BKK. Sorry about that Pacho, with the program we are running, once it gets in wrong it stays wrong!

ABU AIL ... A15AC showed up the first of the month from this rare spot. Hope you all got it.

China continues to be active with reports of BY9GA being worked on numerous days usually around 14.090.

W6JOX ... reports he now has 202 worked and 196 confirmed, and has RTTY DXCC on 10,15 and 20. I bet that has gone up a few since he wrote me.

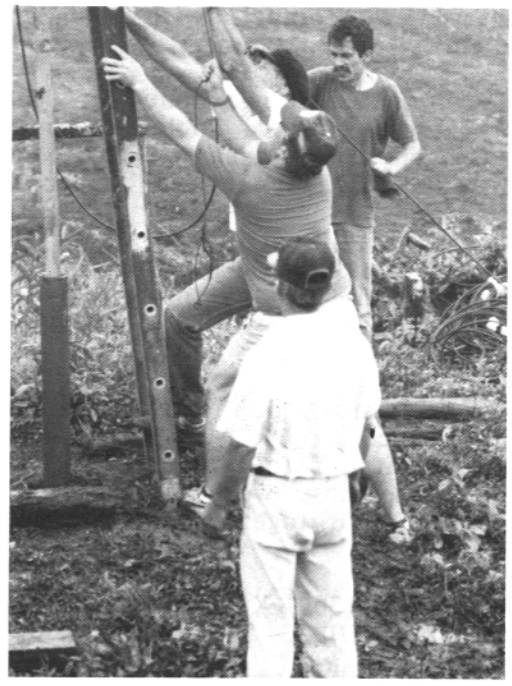
And the photo caption on page 15 of lasts months issue should have read that the 1st contact was WITH JA1ACB, not by him.

The BARTG Spring RTTY contest will take place March 19th through the 21st. Rules are basically the same as last year and printed elsewhere in this issue. I plan to operate as either Single again or may take on Hal, Jay and Betsy for Multi-Op with N1DGC, and WB1AEL ... don't know just yet which way it will go.

Well sorry for the short column, I have been traveling the past few weeks and even saw our Publisher Dale out on the West Coast. (ED:That' true!). My traveling has now slowed down and I can spend some more time listening to the bands. Hope to have a great deal more DX News next month for you. But I am sure you will enjoy Dick's story about VP2EDX.

See you then, and a tip of the DX HAT to W7MI, W6JOX, HC5K and TG9VT.

de Roy, KT1N



Come on guys, hold the ladder, Ted is up there!

BARTG SPRING RTTY CONTEST

WHEN: 0200 GMT Sat. Mar 19, 1988 until 0200 GMT Mon. Mar 21, 1988
The total contest period is 48 hours but not more than 30 hours of operating is permitted. Time spent as listening periods count as operating time. The 18 hours of non operating time can be taken at any time during the contest period, but off periods may not be less than 3 hours at a time. Times on the air must be summarized on the Summary Sheet.
WHO: There will be separate categories for Single Operator, Multi- Operator and SWL stations.
BANDS: 3.5, 7.0, 14.0, 21.0, and 28 Mhz bands.
STATIONS: Stations may not be contacted more than once on any one band but additional contacts may be made with the same station if a different band is used.
COUNTRIES: The ARRL DX countries list will be used and in addition, each W/K, VE/VO, and VK call areas will be counted as a separate country. NOTE: W/K, VE/VO, and VK count once each only for QCA purposes.
MESSAGES: Messages will consist of:
(A) Time in GMT. This must consist of a full four figure group and the use of the expression "same" or "same as yours" are not permitted.
(B) RST and message number. The number must consist of a three figure group and start with 001 for the first contact made.
POINTS: Points can be claimed as follows:
(A) All two-way RTTY contacts with other stations within one's own country will score two points.
(B) All two-way contacts with other stations outside one's own country will score ten points.
(C) All stations can claim a bonus of 200 points for each country worked, including their own. NOTE: Any one country may be counted again if worked on a different band but continents are counted only once.
SPECIAL NOTE: Proof of contact will be required in cases where the station worked does not appear in any other contest log received or the station worked does not submit a check log.
SCORING:
(A) Two-way contact points times the total of countries worked.
(B) Total country points times 200 times the number of continents worked (Max 6).
(C) Add (A) and (B) together to obtain the final score.
SAMPLE
Exchange points (302) X countries (10) = 3020.
Country points (10) X 200 X Continents (3) = 6000 (C).
Add (A) and (B) together to obtain the final score. Sample calculation follows:
Exch. Pts. (302) X Countries (10) = 3020
Country Pts. (10) X 200 X Continents (3) = 6000
(A) and (B) added together to give total = 9020
LOG AND SCORE SHEETS:
Use a separate sheet for each band and indicate all times on the air. Logs to contain: Date, Time GMT, Callsign of each station worked, RST and Message number sent - Time, RST and Message number received and the points claimed
NOTE:
1. Logs received from SWL listeners must contain Callsign of station heard, report sent by that station and Callsign of the station being worked. Also include the Date and Time (GMT) that the QSO was logged.
2. Incomplete loggings are not eligible for scoring and will be classified as Check Logs.
3. The summary sheet should show the full scoring, the Times on the air, Address for correspondence, and in case of Multi Operator stations, the Names and Callsigns of all operators involved with the operation of the station during the contest.
4. **All logs must be received by May 28th 1988 in order to qualify.**
SUMMARY AND LOG SHEETS: Both are available from the Contest Manager at the address shown below. In the UK on receipt of a large (A4) S.A.E. All other countries outside the UK require no envelope but will need 6 IRC's to cover the cost of postage.
SEND LOGS AND SUMMARY SHEETS TO:
Peter Adams, G6LZB
464 Whippendell Road
Warford, Herts
England WD1 7PT
The judges decision will be final and no correspondence will be entered into in respect to incorrect or late entries. All logs submitted shall remain the property of BARTG. Certificates will be awarded to the top leading stations in each of the three groups, the top station in each Continent and to the top station in each W/K, VE/VO, and VK call areas.
ADDITIONAL NOTES: if a contestant manages to contact 25 or more different countries on two-way RTTY during the contest, a claim may be made for the Quarter Century Award (QCA)issued by BARTG and for which a charge of four (4) Dollars U.S. or 18 IRC's is made.

Holders of existing QCA awards should indicate and list new countries, to be added to their existing records. Make your claim at the same time you send in your log. However, in view if the high volume of work which the Contest Manager will have to deal with, it will not be possible to prepare and dispatch any new awards or to up-date any existing records until the final results of the contest have been evaluated and published. Additionally, if any contestant manages to contact stations on two-way RTTY within each of the six continents and the BARTG contest manager receives **(cont. pg. 11)**

(BARTG CONTEST cont. from pg. 10)

either a contest log or a check log from each of the six stations concerned, a claim may be made for the WAC award issued by the RTTY Journal. All necessary information will be sent to the RTTY Journal after the contest results have been evaluated and dispatched. The RTTY Journal will issue the WAC award upon receipt of $5.00 U.S. for those not currently subscribers to the RTTY Journal. All RTTY Journal subcsribers are Free and mailed direct to the station concerned.

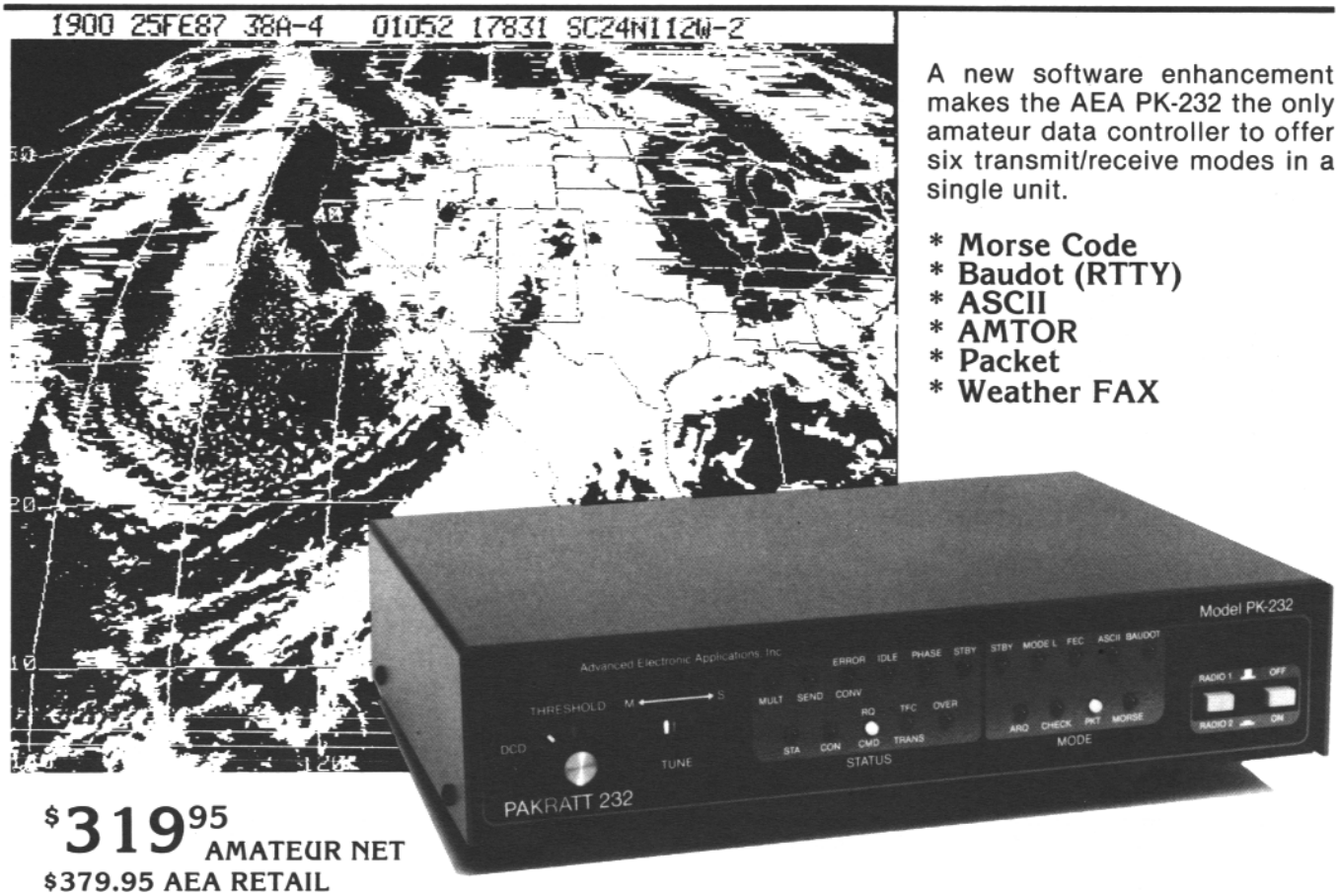
1987 VOLTA CONTEST RESULTS

#	CALL	EX.PTS	QSO	3.5	7	14	21	28	TOT	SCORE
CLASS A1: Single Operator/all band										
1.	I2OLW	3111	200	6	12	54	19	6	97	60353400
2.	OK2FD	2525	199	10	9	48	17		81	42207900
3.	G4SKA	1958	174	5	8	46	18		77	26233284
4.	SM5FUG	1281	148	4	5	37	12	1	59	11185692
5.	HB9HK	1389	100		2	40	9	5	56	7767200
6.	HB9BNP	1162	107	2	4	35	15	3	59	7335706
7.	KB2V0/4	1249	86			37	4		41	4403974
8.	PY7JJ	1354	55			19	12		31	2308570
9.	W7MI	1263	55			27	2		29	2014485
10.	PA3DBS	641	75			23	14		37	1778775
11.	12WEG	520	63	3	5	32	2		42	1375920
12.	IV3UT	453	50		1	22	6	2	31	702150
13.	G4MKO	345	60		4	20	7		31	641700
14.	W2KHQ	473	27		3	11	4		18	220878
15.	HA5CP	199	47			15	2		17	159001
16.	I6KYL	222	30		1	16	5	1	23	153180
17.	IK7IMO	135	38		4	14	10	1	29	148770
18.	CT4KO	134	40			11	10		21	122560
19.	I0UZF	127	22			12	3		15	41910
CLASS A2: Single Operator/single band										
1.	I1BAY	1433	117			14			36	6035796
2.	IO2KYM	1073	87			44			44	4107444
3.	G0AZT	1006	100			36			36	3621600
4.	EA5KFI	840	121			35			35	3557400
5.	SP9BCH	551	77			31			31	1315237
6.	I2KFW	453	46			30			30	625140
7.	G0GGR	307	61			23			23	430721
8.	SP3BGD	340	54			21			21	385560
9.	VE2QO	553	33			16			16	291984
10.	SM5AAY	232	40			19			19	176320
11.	IT9CCB	515	19			17			17	166345
12.	OH2LU	161	26			14			14	58604
13.	HP1AC	230	10			8			8	18400
14.	WA5KBH	108	9			9			9	8748
15.	I2JIN	55	12			8			9	5280
16.	SM7BGE	26	9			5			5	1170
17.	YO2CMI	30	5			2			2	300
CLASS B: Multi-Operator										
1.	LZ2KIM	1849	173	8	11	29	16	1	65	20792005
2.	EM6AAK	1160	129			30	18		48	7182720
3.	OK3KGI	564	81	6	4	23	7	1	41	1873044
4.	IK4BWC	404	60	1	7	25	2		35	848400
5.	UZ0FWI	176	44			19			19	147136
CLASS C: S.W.L.										
1.	NL4483 F. van Oostenbrugge	735	79	2	9	36	6	3	56	3251640
2.	ONL383 Yerganian J. Jacques	407	50			21	4		25	508750

CHECK LOGS: I1BAY - LA3VP - EA8AKQ - SP6EEK - SP3BGD - I2DJX - I2DMI - I2UVI - LX2CP - OH2LU

New PK-232 Breakthrough

Six Digital Modes - Including Weather FAX



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

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

$319.95 AMATEUR NET
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Your home computer (or even a simple terminal) can be used for radio data communication in six different modes. Any RS-232 compatible computer or terminal can be connected directly to the PK-232, which interfaces with your transceiver. The only program needed is a simple terminal program, like those used with telephone modems, allowing the computer to be used as a data terminal. All signal processing, protocol, and decoding software is in ROM in the PK-232.

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

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

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

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

AEA Brings you the Breakthrough

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Lynnwood, WA 98036
(206) 775-7373

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

CONTESTING

Like the guy who could only cut three cords of wood each day because he didn't realize his chain saw had a motor ("What's that sound?"), a logging computer can revolutionize your contesting.

THE CONTESTER III

There are some public domain programs written in basic that will dupe and log a contest but Pete, **N4ZR**, sells the first real-time logging program that looks to me like it is be fast enough to use on all modes. *(WINNER'S EDGE SOFTWARE, 2003 SARAZEN PLACE RESTON, VA. 22091).* It can be configured to run all the big CW/SSB contests as well as the RTTY tests. On the C-64 it will handle about 2000 contacts per band (only a limitation for Jay and me).

Although I didn't try the program, it boasts an integrated CW function, interfacing to the transmitter to handle both logging and sending from the keyboard. On most contests it keeps a running score, a multiplier list, QSO rate and points per contact as compared to points per multiplier. Pete claims an average duping time of less than 1/10 second. It requires a disk drive. The initialization process in which you format your disks and configure the system for the contest is a bit lengthy. A user cannot expect to pick it up 20 minutes before the starting gun and make it run. The manual is well-written and gives you step-by-step instructions.

When I wrote him for some details, Pete said he was a little surprised, "I would never have thought of the RTTY community as a market ... because of the need for TWO computers to do the whole job."

I don't know how many RTTY folks would buy more than one computer but I see C-64's going for as little as $100 these days. A cheap disk drive for the Commodore seems to be a contradiction in terms but since your RTTY program is probably on cartridge, if you already have a drive, and can do without preloading your buffers you can free your drive for the log program.

COMPUTER LOGS

How badly you need a logging program depends a lot on how well and how fast you count beans. I have seen some great bookkeeping on log sheets, but mostly I have seen the way the rest of us do it. On the second day of a 48-hour contest, the time it takes me to see if I have worked a particular W4 is enough for intelligent life to develop from bread mold. There are really only four factors:

RELIABILITY

This is perhaps the most important factor of any logging software. If you are forced to waste operating time trying to get the program to work, you're gonna lose. Although it was fed from a separate supply, the computer at HD8CQ failed several times. The extra operators saved us as they kept the station on the air and logged manually while I re-entered parts of the log. The instructions may say that hard copy is an option. Don't believe it. Any data that you cannot slip under a puppy is subject to Murphy's Law.

QUICK DUPING

Before you start the exchange, you'd better know if it's a dupe. Although we ran full steam for 48 hours from **HD8CQ**, the average was less than three QSOs per minute. The SSB/CW guys wrinkle their nose at that sort of rate but on RTTY it's truckin' along pretty well. Since the exchanges on RTTY are slower than the other modes, the time wasted on a dupe is more costly.

If you're DX, the folks will wait in line, but if you're not DX and you have several stations calling you, there is no time to waste. The only station that ever waited for me through three contacts wanted to talk to me about key-clicks. *Farley's law of consistent propagation* says, "If more than one station is calling you, the one you have already worked will have the strongest signal". Clear the frequency for the new station as possible with,"KE7PN WORKED B4 NEW QRZ". The only thing worse than having to rummage through a stack of dupe sheets before you answer is to send the exchange, turn it back then discover that he's a dupe. Hunt-and-pounce is a way of life of the North American station. **(cont. pg. 14)**

(CONTESTING cont. from pg. 13)
If he is rooting through the sheets and misses an opportunity to call the DX, it may be two minutes before he gets another chance. (This way you get calls that start with two lines of RYs, your call five times, and then 10 seconds of dead carrier followed by transmitter failure. He finally found you on his dupe sheet). At some locations, the northern path for DX allows only a few minutes during which we can snag a 35-watt African through the smoking craters left in the ionosphere by Italian kilowatts. This only increases the reward for efficiency.

STATS

Points-per-QSO vs. points-per-multiplier, current QSO rate, instant multiplier checks and other real-time statistics can take a lot of the guesswork out of tactics. In Volta, for instance, working a country on four bands counts as an extra multiplier! If **TG9VT** answers you on 15 meters, when you send your exchange, you should already know on which bands you have worked him and when the path will open on ten for a possible COZY DEAL.

A FINISHED LOG

KT1N, contest manager for the CQ-WW, received more than 300 logs. This is easily twice the number received for any other contest but still less than a third of the participants. The difference between players and logs may be at least partially explained by the tedium associated with final log preparation. A clean, computer log, can be easily scored and a copy in the mail by the following Monday. (Jay adds an SAE and postage to the log package. The contest manager returns it when he gets the log. Otherwise the first warning you will have that your log was lost is when your call is missing from the results.)

CLONES

Jay and I have been won over by the compatibles. I have now converted the program which we ran from the Galapagos to IBM format and I am certainly impressed with both the speed and ease of the newer technology. Color does a lot for eye strain and simplifies complicated screen displays. Anyone who has had to wait for disk access will be ecstatic with a hard drive. The only thing I don't like is the RFI. Most of the suggested remedies helped but I am now convinced that fast computers in plastic cases are inherently noisy. That's something to consider when you start yearning for all the fun stuff.

GRAY LINE

Grayline paths are important to more than just DXers. TRIDOS SOFTWARE PUBLISHERS, 4004 SW Barbur Blvd., Portland, OR. 97201 has a program called TERMINATOR. The screen display shows a world-map grayline, updated every 2 minutes, allows a fast forward, a check of any date and time and shows the locations and local times for a hat-full of user programmed cities. It is ram-resident and can be called from any other program you happen to be running. If you find a giant pileup on a station which is in the contest and probably will be on the air for a while, it is nice to know if the signals are improving or liable to drop out any second. This gives you the option of working the band for 20 minutes while the signals peak or slugging it with the rest. It runs on clones and requires CGA or EGA resolution.

BAND-AID

WB8ZBD and **K8DDV** built a program called BAND-AID which they market through BASE (2) SYSTEMS, 2534 NEBRASKA ST. SAGINAW, MI. 48601. Although it would probably be too slow to use in real-time during a contest, it would be a great tool for strategy planning. Utilizing the current WWV report, it produces the QST type propagation charts for any target country in its rather extensive database with provisions to add any new ones that it might be missing. It displays beam heading, distance, sunrise/sunset and a printable graph showing MUF vs. TIME between your location and the target. With a little key poking in the few minutes before a contest it will give you an pretty good lock on the info needed for band planning and COZY-DEALS based on current propagation conditions instead of magazine predictions over a month old.

I found it to be right on the money for path and time but a little pessimistic regarding higher band openings (Stations were on 15 meters that BAND-AID claimed shouldn't be there). The version I saw could not beconfigured to be ram-resident but with a little fiddling with the SHELL command you could probably call it from in Basic.

(cont. pg. 15)

(CONTESTING cont. from pg. 14)

SARTG RESULTS

There are 132 logs listed in the 1987 SARTG results including 34 North Americans and 4 Asians, an excellent turnout for mid-August, especially for the JA stations who in the past have not regulars in RTTY contests. Although propagation was not the best for high band DX, there was stiff competition for top honors and some big scores. **9H1EL**'s 729,675 topped all categories followed by **TR8DX** with 618,000 and **SM4CMG** with 483,300 points. **KB2VO/4** whose call seems to have found a home the top of the recent contest results, placed in the top ten world-wide with 198,000 points from 223 QSO's and 75 multipliers. **AB0Y/4** was 2nd in North America followed by **W2FG, WB5HBR** and **AA5AU** in an almost dead heat for 3rd through 5th on this side of the pond.

JA1BYL was the top Asian entry with 38,420 points followed by **JA1DFQ, JA1DI**, and **JA2NNF**.

The multi-operator class was again won by the Bulgarians. **LZ1KSP** turned 440,200 points into first place, more than 200,000 ahead of **YU7KMN** who stretched an eight high-band multipliers into a 7000 point lead and a 2nd place win. **WA7EGA**, the only NA multi-op entry, finished 3rd in a field of 12 multi-op entries.

SARTG RESULTS 1987

TOP SINGLE OPS

9HIEL	729,675
TR8DX	618,000
SM4CMG	483,300
HB9BNP	379,120
SM5FUG	334,080
G4SKA	328,860
EA3OL	244,900
Y43BER	255,525
PA3DBS	209,250
KB2VO/4	198,000

TOP MULTI-OP (WORLD)

LZ1KSP	440,200
YU7KMN	239,360
WA7EGA	232,400
UZ9CWA	218,670
OH2AY	197,400
OK1KQJ	186,000
G0ATX	176,150
DL0EJ	163,060
YU4EZC	98,800
OZ7SAC	74,955

TOP NORTH AMERICAN

KB2VO/4	198,000
AB0Y/4	150,100
W2FG	141,035
WB5HBR	140,160
AA5AU	147,020
K6KW/0	82,935
N6GG	73,060
N9AW	67,575
W3AOH	61,190
W7MI	49,555
W2JGR	46,420
W0LHS	32,175
W2KHQ	31,350
KD4OM	30,580
VE7YB	27,825
WA8FLF	19,775
KA1LMR	15,655
K4JYS	13,860
W8LNK	13,250
KL7PG	13,200
W6CN	12,615
K8CV	11,475

This year SARTG plays 20 through 21 August. Put some red ink on the calendar. See ya next month!

de Hal, WA7EGA

Richard E. Polivka
N6NKO
18943 Vickie Ave. #34
Cerritos, CA. 90701

PACKET

This is the start of a new year. You have had a chance to set up the new equipment that you received for Christmas and play with it. So let's put it to use; read on.

BEGINNER'S COLUMN

Over the past several months, we have discussed some of the basic operating parameters of the TNC, how to talk to the unit with a computer or dumb terminal, and how to hook it up to the radio you wish to use. So, this month, let's start using it and talking to people.

First, turn on all of the equipment that you will be using and make sure that the volume level from the radio to the TNC is at a level where the packets are being decoded and displayed. If you are not seeing anything but the TNC is responding to your commands, then check the monitor settings. In most TNC's that are shipped now, the "Monitor" settings are set to "ON". It may take a bit of fiddling to get the volume level right but once it is working, leave it alone. You do not want to feed too much audio into the unit for it wants to hear sine waves and not square waves and hash. You also do not want it set too low because then it will only decode the real strong stations. TNC's can do a very good job of decoding some pretty weak packets if everything is set up right.

You should now be seeing the decoded packets on the screen. There are two display formats that I have seen and they are each a bit different in how you read the header line. As an example, if I were to connect to W6IWO and used N6IHQ and W6OXP as digipeaters, one brand of TNC would have a display looking like this:

N6NKO>N6IHQ*>W6OXP>W6IWO

The asterisk represents the station that was heard and displayed. The other form is like this:

N6NKO>W6IWO,N6IHQ*,W6OXP

The first format shows graphically the path that is used to route the signal, where as, the second example shows the originating station, then the destination stations with the digipeaters in a list following. I like the first display format better because it is easier to backtrack a path and differentiate between the originating station and the destination station. So let's try and connect to ourselves to see if the whole system will function.

First you issue a command to connect your TNC to your call through a couple of digipeaters. If I wanted to connect to myself through a couple of digipeaters, I would type the following:

C N6NKO VIA N6IHQ, W6OXP

What I am doing is telling the TNC to issue a connect request to the station N6NKO via the digipeaters N6IHQ and W6OXP. If you have the TNC set to USERS 1, this will not work because the channel is occupied with the connect request so you need to reset the USERS to 2 or more. If the request is successful the TNC will display that you are connected to yourself via a digipeat path. Give the connect request some time to succeed. If the channel is busy, it is quite possible that the packet has collided with another packet being transmitted simultaneously therefore unable to be decoded. So the TNC assumes that after a period of time (FRACK), the TNC will re-send the request until the "Connect" is successful or the RETRY limit is exceeded. Either way, the TNC will tell you of the situation. If you get connected, try typing some information and see if it appears on the screen. This may take a couple of transmissions by the TNC, so be patient. The TNC's job is to make sure that the data gets there and is correct. When you are satisfied that all is well, disconnect from yourself and start looking around. Do some channel snooping and find someone to contact. You will be amazed at the amount of traffic that is flying by on some of the channels. So, go out there and start typing up a storm. Don't feel bad if you can't type as fast as others, just get in there and have some fun! Call CQ or answer one. Make some new friends.

THE MAILBAG

Morton Toussaint, N7AKQ sent in a letter with a couple of questions and both of them apply to the new user of Packet as well as the seasoned veteran.

His first question deals with multiple connect operation. How do I switch between different channels when connected and with what character? Let's handle the second part first, then the first part should flow smoothly from there on. **(cont. pg. 17)**

(PACKET cont. from pg. 16)
You must specify a "Channel Switch" character to switch between channels. With my system, I use the backslash (\) character. The hex code for it is $5C. Now, how to perform the switching while connected. The Channel Switch character is typed at the beginning of the line with the number of the channel following it. Then type the text you wish to send to the other person hooked up on the channel. Any subsequent information typed in will go to that channel unless you specify another channel at the beginning of the line. That is how to use the channel switches on the PK232.

His second question concerns the use of the UNPROTO mode of communication. The use of a "Un-numbered Information" packet can be many and wide ranging. The problem with UNPROTO operation is that there is no error checking or handshaking involved. If the packet gets in a collision, no one will know if the packet got through. But it is great for sending out a CQ or having a roundtable discussion on a quiet channel. If the channel gets busy, it is better to use the MONITOR TO and the MONITOR FROM functions than the unprotected mode. You may see the same message repeated several times depending upon the conditions but at least the messages would be getting through correctly and assuredly.

There was a request from someone and unfortunately I can't remember the name or the call but the gentleman was wondering about contesting on Packet. Contesting in itself is a hard way to go for anyone but it is a great way to sharpen up one's operating skills and proficiency. One of the biggest problems that I see operating contests with Packet is that the channeling used presents one of the biggest problems on the HF bands because of overcrowding. In order for the system to work you need a valid connect and then exchange the required information. With the speed on HF at 300 baud, there is not that much speed available to carry information. Another one of the problems that comes to mind is just the sheer time to make the connect, pass the traffic and then disconnect. So, with all this in mind, I do not think Packet would be a good contesting medium. You can make faster and more reliable contacts on RTTY, SSB, an CW because you do not have to fuss with the time that it takes to do the connect and disconnect.

During the last Field Day that I participated in here in 1987, I did most of the work on VHF Packet and it was amazing how the channel was held by just a few stations and the others had a hard time trying to use the channel. One of the biggest problems that I see with this is that operators were changing the values of the timers used to allow for faster turnaround. I found that when the settings were set for practically no delay, I had no problem keeping up with this small group. That is no way to contest! I guess that I believe in fairness and may the best man win amongst the equals and not live by the phrase "All Men Are Created Equal And Some Men Are More Equal Than Others". What I am trying to get at is Packet Radio is a medium that can be corrupted very easily to one person's advantage. So let's leave it out of the contesting arena and use contests to try our prowess directly.

NEXT

Next month, we will cover in the Beginner's Column how to operate a BBX system and go over the basic commands involved. Another project that I am starting to work on is a comparison list of the commands used in the various TNC's on the market. This would prove to be interesting in terms of frequency accuracy, receive sensitivity and selectivity. I wonder if there are any manufacturers game for a test such as this.

I know there are many other things out there operators are doing, so why not send in what you have been doing that is new and share it with us all. We have already discussed in past columns PIX and TCP/IP. What else would you like to read about? Drop me a line and I'll do my best to cover it in this column. In this way I feel I can better serve you, the reader.

ETHER BURNING!?

Through the generosity of a friend, I am now on the HF bands. Unfortunately, I am limited to the ten meter band because of the lack of space here in the apartment. I have a dipole set up at 8' (feet)! So, listen for a real weak station from out of Southern California in the 10 Meter Novice/Technician subband. I will be on voice until I get my RFI problems licked. So have fun out there and we will continue with this next month. SK **de Richard, N6NKO**

CHANGE OF ADDRESS

NAME: _____ **CALL:** ____

ADDR: _____

CITY/COUNTRY: _____

ZONE CHART

EXACT CORRESPONDENT ZONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	2	14	10	13	16	18	22	20	25	30	36	37	39	21	22	19	20	17	11	25	29	29	22	22	16	28	25	31	39	35	14	36	25	29	34	39	40	47	44	15
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EXACT CORRESPONDENT ZONE

EXACT CORRESPONDENT ZONE

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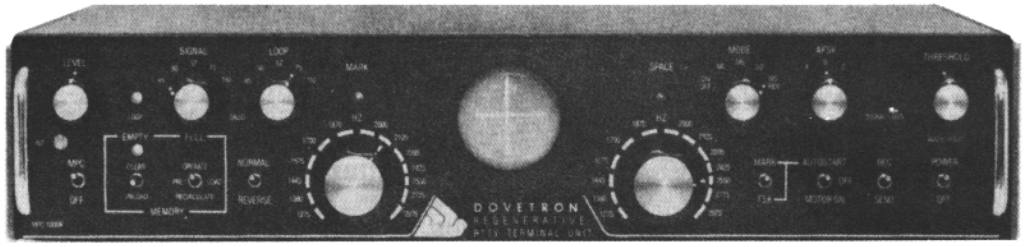

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