Price $1.50

RTTY JOURNAL ©

AMATEUR RADIOTELETYPE - COMPUTERS - PACKET

VOLUME 35 NUMBER 6 JUL/AUG 1987

CONTESTOR JOINS JOURNAL

IN THIS ISSUE

RTTY JOURNAL
Dale S. Sinner, W6IWO
OWNER - EDITOR - PUBLISHER
ALL CORRESPONDENCE TO :
9085 La Casita Ave.
Fountain Valley, Ca 92708
TELE: 714-847-5058

SUBSCRIPTION RATES

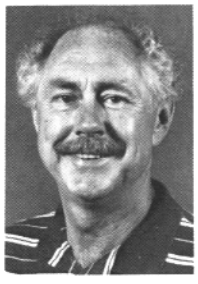
USA	$10.00 per yr.
CANADA/MEXICO surf	$10.00 per yr.
CANADA/MEXICO air	$12.00 per yr.
FOREIGN surf	$10.00 per yr.
FOREIGN air	$15.00 per yr.

All monies in U. S. currency only

POSTMASTER : The RTTY JOURNAL (USPS 391850) is published monthly except May/Jun and Jul/Aug issues which are combined for $10.00 per year by RTTY JOURNAL, 9085 La Casita Ave., Fountain Valley, Ca., 92708. Second class postage paid at Santa Ana, Ca. and additional mailing offices.
Postmaster : Send address changes to RTTY JOURNAL, 9085 La Casita Ave., Fountain Valley, Ca., 92708.
ISSN 0033 - 7161

ABOUT THE COVER

This month we welcome Hal, WA7EGA to the staff of the Journal. Hal will be writting about contesting. He will have the stories up front and behind the scenes about contesting. Hal will be keeping us abreast of all the contests going on in the digital world. If you have questions regarding any phase of contesting direct them to Hal. He will be assitted by Jay, KE7PN. Both of these gents are avid contestors and our quite knowledgeable on the subject. Thanks for joining us gents. As you can see from the cover Hal is also a cartoonist and what better way to introduce him then through his work. His first article is on page 14..



Dale Sinner, W6IWO
9085 La Casita ave.
Fountain Valley, CA.
92708

HITS & MISSES

WORD ARRIVES FROM DEE CRUMPTON, N6ELP

Dee and her husband John have been traveling throughout the United States and so it has been hard for her to communicate from a motorhome. The cat got the microphone and charger cords for the two meter radio that fouled up her two meter communicating. Then she broke her foot which caused her to miss her sons wedding and the Dayton Hamvention. After all that the motorhome transmission went out in Texas and the cat got the cord to the Telereader. With all this they have been having fun and seeing many beautiful sites around the country. She has tried to call different folks including me but times zones, phones out of order, and a busy schedule have made it next to impossible to catch anyone at home. She promises to keep us better informed of where she is from now on. So Dee wherever you are have fun and enjoy your retirement.

OUTSTANDING TEACHER AWARD

Peter Kemp, KZ1Z has been awarded "Outstanding Teacher 1986-1987" by the Central Connecticut State University. Peter has been a teacher at the Bethel,CT. school for 16 years and has many accomplishments to his credit. One of which is the forming of the country's first Educational Amateur Radio Society. This program has been the forerunner of many others around the country and Peter has been the recipient of national recognition for his efforts. The school radio station has been involved with national and global disasters from time to time and this has given the students great insight into the benefit of Amateur Radio. Peter has used Amateur Radio to synthesize many subject matters, such as, geography, math, language arts, current events, and foreign language study. These are just some of the many accomplishments to his credit. Peter also holds an Extra Class amateur radio license, is a life member of the ARRL, was Ham of the Year in 1984, a former SEC, and is currently the Assistant Director in the New England Division. The list goes on and on about Peter and we're happy to have him in our RTTY ranks also. Congratulations Peter and may your many accomplishments bring you success throughout life.

(cont. pg. 13)

Danny Wilson,N6IHQ
4818 Pearce Ave.
Long Beach,CA.90808

PACKET

Once again greetings. I sincerely hope that all your expectations for a great summer are being fulfilled. The hot weather we normally expect on the West Coast here has not really materialized, but I suppose that I will be wishing for a few days like we have been having in about a month from now.

THE BEGINNERS COLUMN

In the last issue of the Journal, we were looking at the message system of the mailbox, how it works and a little on how to use the forwarding system. This month we will be taking a peek into the files section of the mailbox system.

The files section contains just that. Files. These files are not just "to" and "from" messages, but contain information that is useful to many of the users on the network. Many files pertain to Packet Radio itself or Amateur radio news items. You may find items such as the W5YI report, the latest ARRL Bulletins, and maybe a dissertation by a fellow ham as to why Packet is faster than smoke signals, etc. Some files will contain the latest Digipeater maps, others may contain help files for the newcomer, and there is normally a PBBS list file. When you read the directory of files, as in a normal computer filename designation, you can usually tell what is in the file by it's filename.

So lets bring up the directory of files and see what we can get into. To bring up the directory, just type in the "**WD**" command. The BBS will respond with the directory. The directory will contain the filename and the size of the file in kbytes. Next select a file from the directory and type in the command "**WD (FILENAME)**. You have asked the BBS to Download a file to you. It would be best to download files into your computer's memory or to disk. This will allow you to print the file out and read it at your leisure. Otherwise you may have trouble reading it as it is coming across the screen at 1200 baud. (Believe me, if you have a fairly clear frequency even the 80 column screens fill up fast at this speed.)

If you wish to upload a file to the BBS, simply type in "**U**" for upload. The BBS will instruct you on the exact steps to take when attempting this. Remember the file should not appear on the regular message listings. In most cases for the beginner to these computer wonders, not much uploading of files is done. Not that it is unheard of or anything wrong with it, but in at least my case, I had tons of fun downloading some pretty interesting stuff from the BBS listings. You will find a lot of the files have information on Packet and a good way to learn about the mode if you are new is to explore these files.

A good thing to do while obtaining the directory of the files would be to print them out on hardcopy and keep the printout handy for the next time you log on. In this fashion, you have no need to use up frequency time by resubmitting the "**WD**' command. So how do you know if there is something new on the system? Simply type the "**WN**" (WHAT'S NEW) command. This will give you a list of all the new files entered on the system since the last time you connected to the BBS. Another consideration to those sharing the frequency with you is to use discretion when downloading files. If you can keep long file transfers off the air during prime time hours, you will probably get all the information you want in a short amount of time. Doing it this way will also allow you to keep all your hair and keep you from wondering why you have all these long pauses between Packets while the BBS you are connected to is either waiting it's turn, crashing Packets with 10 other stations or both.

I have been getting some mail from the readers and some questions on BBS's and their little quirks. One of the questions was asked about why the Bulletin Board systems are sometimes not around to be connected too. Well, there may be several reasons why, but two reasons are most common. 1). The BBS may be forwarding messages or files to the next BBS in the network, or 2). The system operator may have it off the air for updating. A good SYSOP will usually take some time each day to see that the BBS is in order. So be patient. If the SYSOP has the computer for the BBS dedicated for that purpose you should not have to wait too long for it to be back on the air. However, if your home BBS computer is also used for typing up term papers or calculating a chess move that takes an hour, you may want to try switching to a more reliable system.

With as much literature that has been put out, either over the air or in publication, all the reading

(cont. pg. 19)

Wide Dynamic Range and Low Distortion – The Key to Superior HF Data Communications

- Dynamic Range > 75 dB
- 400 to 4000 Hz
- BW Matched to Baud Rate
- BER < 1 X 10^{-5} for S / N = 0 dB
- 10 to 1200 Baud
- Linear Phase Filters

ST-8000 HF Modem

Real HF radio teleprinter signals exhibit heavy fading and distortion, requirements that cannot be measured by standard constant amplitude BER and distortion test procedures. In designing the ST-8000, HAL has gone the extra step beyond traditional test and design. Our noise floor is at -65 dBm, not at -30 dBm as on other units, an extra 35 dB gain margin to handle fading. Filters in the ST-8000 are all of linear-phase design to give minimum pulse distortion, not sharp-skirted filters with high phase distortion. All signal processing is done at the input tone frequency; heterodyning is NOT used. This avoids distortion due to frequency conversion or introduced by abnormally high or low filter Q's. Bandwidths of the input, Mark/Space channels, and post-detection filters are all computed and set for the baud rate you select, from 10 to 1200 baud. Other standard features of the ST-8000 include:

- 8 Programmable Memories
- Set frequencies in 1 Hz steps
- Adjustable Print Squelch
- Phase-continuous TX Tones
- Split or Transceive TX/RX
- CRT Tuning Indicator
- RS-232C, MIL-188C, or TTL Data
- 8, 600, or 10K Audio Input
- Signal Regeneration
- 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
- Spectra-Tune and X-Y Display
- Transmitter PTT Relay
- 8 or 600 Ohm Audio Output
- Code and Speed Conversion
- Signal Amplitude Squelch
- Receive Clock Recovery
- 3.5" High Rack Mounting

Write or call for complete ST-8000 specifications.

HAL Communications Corp.
Government Products Division
Post Office Box 365
Urbana, Illinois 61801
(217) 367-7373 TWX 910-245-0784

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

MSO'S

Hi Gang! Summer is upon us, with all its attendant activities like lawn mowing, gardening, picnics, sun burns, and hopefully some Amateur Radio related projects! Propagation on the HF bands seems to be improving somewhat, and digital activity certainly seems to be on the increase. The introduction of the multi-mode packet controllers, which contain Baudot features is most likely the root cause, and we certainly welcome the new users to all the MSO's. And while I'm on that subject. at times I feel that some are a bit bashful about their presence on the systems. Let me assure all of you that the SYSOP's maintain these elaborate and costly systems for one reason, and that's for YOUR use. So, don't be afraid to get your feet wet, as you can not cause any harm to the system by using them.

1987 DAYTON HAMVENTION:

If the crowds on the convention floor on Friday during the Dayton HAMVENTION were any indication, this years event was a huge success! Amateur Radio in all its finery was represented again this year at Dayton, and to be truthful, this author doesn't see any way for the average person to see and explore all of the HAMVENTION's features in the two and a half days allotted. It seemed like every other booth this year was displaying some kind of IBM clone computer for sale, and this years expanded Flea Market contained the history of Amateur Radio in depth. Many a bargain was struck, even though Friday's rain did dampen spirited trading for a short time. After some astute observations, this author has determined that boating must rank second to Amateur Radio in popularity, as many anchors were seen being hauled out of the flea market!

This years Digital Digest, (old RTTY Forum), was well attended, and the new format provided the opportunity for panelists and attendees to ask questions about RTTY's present and future. Panelists included operators, MSO SYSOP's, (including this author), Amateur Radio journalists, three of the leading digital equipment manufacturers, and a representative of the Trio- Kenwood Corporation. All seemed to believe that RTTY is alive and well, and probably due to the new multi-mode packet controllers, growing in popularity. Trio-Kenwood asked that RTTY users make their specific equipment needs known to Kenwood, by dropping them a letter, outlining the features they desire. Here's your chance to help plan Kenwood's new equipment, with an eye towards RTTY features. Such things as stability, mark or space frequency readout on digital displays, AFSK and FSK, use of filters in any mode, etc., all can be part of new equipment, but only if we let the major equipment manufacturers know of our needs. It would be nice if there was some standardization between the top equipment manufacturers, in regard to such features as what frequency, (carrier, mark or space), the digital display reads when in various modes, (especially RTTY), etc. However, they never know of our desires in these areas unless we let them know, so sharpen up your pencil, and drop a line to all of them!

This years RTTY Dinner was lots of fun, even though some of our friends were not able to attend due to sickness and deaths in their families. We missed seeing them, and hope they will be able to join us next year! Jerry Trichter, WA1IUF, held forth as this years host of the RTTY Dinner, and a marvelous job he did. The Right Reverend Bob Foster, WB7QWG (Quacky Wacky Goose himself), led the group in the solemn rights of the Oh-Wha-Tah Society, and as the mystical and magical words were being recited,a hush fell over the group. (A 'hush' within this group resembles the low end of the SSB portion of 20 meters on a contest weekend!). Everyone had a good time, and we hope that next years gathering of the clan will be even better!

NEW KA0JRQ DUAL-PORT MSO/PACKET SYSTEM:

Larry, KA0JRQ, from Glenwood, Iowa, is now using the new "HAL" RMX-3100 Multiplex Switch, in a dual-port HF and VHF Packet/MSO system. It provides access to his HF MSO and VHF Packet system simultaneously on the sameHAL MPT-3100 Terminal. All commands are the same, except the addition of a "busy message" you receive, in case that one of the channels is being utilized when you interrogate the system. For instance, when you try to connect on Packet, and it is currently 'busy' on "HF RTTY", the system will respond with a "call a little later please" message. It will however allow you to drop a note to the printer during the 'busy' time, and the command to activate the printer is, PRINT.JRQ. Turn off the printer with the standard four N's, and the system will reply with a "MSG STORED" response. Sounds like quite a sophisticated system, and flexibility is certainly the key word! Larry also mentions that the Kentucky/Midwest RTTY Net has switched to

(cont. pg. 6)

(MSO's cont. from pg. 5)
their Summer frequency of 7.082 Mhz. If you have traffic for the National Traffic System, this net will do the job for you!

AMTOR MAILBOX INFORMATION NEEDED:

I'm in receipt of a letter from LU4EGE, asking about information on how to obtain a "AMTOR Mailbox System". LU3EGE is presently utilizing a Commodore C-64 Computer, disk drive system, and CP-1 Interface. Anyone who has information on a AMTOR mailbox program that will run on this system can either provide that information directly to LU3EGE, or to me at the RTTY Journal. Thanks!

K4CZ AMTOR MSO NOW ON 30 METERS:

Russ, K1D0W/4, reports that Henry, K4CZ, Lexington, Kentucky, has moved his AMTOR MSO to 30 Meters. The operating Frequency (mark) is 10.140 Mhz, and everyone is welcome to use this system. The SELCAL code is KKCZ, and once you have linked with the system, CZZW, followed by a " plus" sign and a "question mark", will cause the MSO to be activated, and be self-promting from that point. You do need to manually take over the sending when it's "your turn", as the MSO does not send the 'plus' and 'question mark' automatically. Some of the callsigns seen recently on Henry's 30 Meter AMTOR MSO are: VE3CM, WA8RJK, W8CLV, W3GL, W2QFR, K1DOW/4, K1HB, K7KOJ, KA1AW, K7BUC, WB3FNP, K0TKS, WB7CNJ, W9CD, W8FYE, N2FDR, and K0ST.

SIGN OF THE TIMES DEPARTMENT:

John, TG9VT, from Guatemala City, Guatemala, sends word that he "never ceases to be amazed", while operating RTTY. John says he was operating at 2355 UTC and was able to access a C-64 style mailbox, operated by UZ3AYR, on 14 092 550 HZ! It is a beacon type mailbox, accessed with "RYRYRYRYRYRYRYRY:UZ3AYR.

Russ, K1DOW/4, provides information on the LA9OK AMTOR MSO. The SELCAL for this system is LAOK, and it contains a unique feature that allows the remote user to command the system to QSY to a frequency of his choice, (within the authorized digital spectrum). After you log on, the command to QSY is: QSY (FREQ OF YOUR CHOICE) plus a "question mark". The MSO will then QSY and call you on the frequency you requested. The highest frequency scanned by LA9OK is 14075 Khz., where it is suggested you. call initially. Sounds like quite a sophisticated system, and it could be utilized for propagation information as well. Remote users should insure that the frequency they choose to QSY to is not in use prior to commanding the system to QSY.

MSO RAMBLINGS:

Dee Crumpton, N6ELP, (former owner/editor of the RTTY Journal) is travelling across the U.S.A. in their new motorhome, and was last seen near Savanagh, Georgia, thoroughly enjoying life. It is reported however, that she is having a bit of trouble with her mobile RTTY equipment, which we all hope is repaired soon.

Dick, WD4MTC, is also travelling this Summer in their motorhome, and is feeling great. WE all are very happy to see Dick up and about in such good style, after his very serious sickness, and hope that he will re-join us on the National Autostart Frequency soon.

Bob, W7IQO, reports that his MSO will be off the air during the Summer months, and he looks forward to re- activating it this Fall. Bob and Gretchen also plan some travelling this Summer.

That's it for this issue Gang! Remember that this is the time of the year for O' Mr. Lightning Bolt to visit the area, and we should all be prepared in that regard. Have a super Summer!

73 de Dick, K0VKH

(HITS & MISSES last part)

That's all for this month. Hope you like the four additional pages. We will try to continue this policy but it all depends on the information that comes in. I welcome you to help us by contributing an article or by sending input to our regular writers. I want to print your articles so don't be bashful, sit down today and write to any of us, we want to hear from you. Maybe you won't see your input for a couple of months but we'll sure try to work it in as soon as possible. Until next month, take care, and 73's to all. **de Dale, W6IWO**

*A MOMENTO OF AN EARLY BUILDING PROJECT...
AN OUTBOARD, HEAVY-DUTY PLATE SUPPLY FOR RTTY!!*

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

CONNECTIONS

This combined-issues thing for May-June and July-August RTTY Journal gets to be addictive - nearly two months without having to write the column and then, all of a sudden, only two days before deadline! But the last two months have been busy here what with acquiring an AEA PK-232 and then finding a Sears S600 portable printer/terminal. The S600 was acquired as the result of a close-out sale (same as a Brother EP44). It is a shame they no longer sell them, as they make a great portable/mobile substitute for a CRT type terminal.

The little thermal/film ribbon printer has a bi-directional RS232 port with speeds to 1200 baud. The print speed is not that great - only 20 to 30 characters per second, but it has xon/xoff and hardware handshake so works fine with the buffered PK232. The portable setup is a TR2600A Handy Talkie and the PK232/S600. The PK232 works on 12 volts and the printer will work on four "D" cell batteries so the system is ideal for emergency traffic handling too.

When not operating portable/mobile, will be using the PK232 with my IBM PC clone. Just last week received Kalt Associates DIGPAC II communications program to run the PC/PK232 combo. Hope to write a review of this program in a forthcoming issue of the Journal.

And there is Mail - A really tough question in a letter from Dan Testa. He has a Hewlett-Packard 9866A thermal printer that he wants to get going with a Commodore Computer. The 9866A has a circular connector for attachment to a H-P Computer. After a great deal of checking, I was only able to determine that it is a proprietary H-P interface (non-standard) and the way it is configured and used depends on the model of H-P Computer it is used with. I was unable to come up with a schematic or connection diagram. If anyone has any information on the 9866A, I am sure that Dan will be very happy to get it. Send it to Dan Testa, 390 Lincoln Ave., Newark, NJ. 07104. He also needs connection data on a Microtel 1000 printer that prints on four inch wide paper.

Jim, N9DUZ is looking for info on connecting a printer to a ROBOT 800. Some have told him it cannot be done, but he has seen ads for cables to connect a printer to a 800. Has anyone information on this problem? I have not found the ads yet so cannot comment until I see what is in the ads.

Manley, W6FAO has a frustrating problem. In the past, he has used an Apple IIE with a Kantronics Interface and an Apple dot matrix printer with no problems. Since then he has acquired an Apple IIGS and an Imagewriter II printer. Now the Interface and software work fine except the printer does not print the RTTY data like it did with the old setup. From what Manley said in his letter, Kantronics was not to much help - apparently implying that he needed newer equipment. This may be true, but in my experience, there are many ways to skin a cat, although some are not easy! First one needs to determine the root cause - is the printer incompatible with the Kantronics interface/software? Or is it a difference in the new IIGS I/O port? Or is it something else. One has to approach problems of this kind like a detective solving a crime - gather all evidence, analyze it, question the witnesses, and do the lab work. And, we can ask: Does anyone out there have an IIGS working with a printer and can offer some suggestions? By the way, I can sympathize with the Vendor, as I know the phone is always ringing and customer support does require time. Some of the customer support can be decreased by good operators and technical manuals. Software does require upgrading as bugs are found and as suggestions for new features come in. However, the Vendor must remember that the Customer is always right, even when he is wrong, he is right! Because without the Customer, the Vendor will cease to exist.

Time to get off the soap box and on to the next letter. Mike, K4LDL, is looking for information on connecting and operating a Radio Shack Model 100 with Packet and possibly RTTY. The Model 100 is a nice little laptop with a serial port and it has a built-in (in ROM) terminal program called Telcom. The operators manual should give a description of this program and how to connect the Model 100 to a Modem, (I have not seen the manual so cannot say for sure). The TNC looks like a Modem to a Model 100. Just make sure the TNC you use with the Model 100 has an RS232 port for the terminal connection. Most TNC's are RS232 compatible, only units like the PK64 (which must be used with a Commodore C64 or C128) do not have RS232 connections.

If one wants to use the Model 100 on RTTY or AMTOR or CW, then the TNC must be a multimode unit --------- **(cont. pg. 8)**

(cont. from pg 7)
such as the Kantronics KAM or AEA PK232 or similar. Don't forget that the NEC 8201A is nearly identical to the Model 100 and has the same built-in terminal program.

Technical Manual Of The Month

This is a new award to be conferred on the Vendor who, in this writers judgment, has made a significant contribution to the enlightenment of the user/customer. (A flourish of trumpets, if you please) This months winner is: Kalt Associates of Anchorage, Alaska for the operators/users manual for their DIGPAC II ASCII communications program and message traffic system. This 116 page manual ACTUALLY HAS AN INDEX! It appears to be type set and is printed on high quality glossy stock. It is quite well written although an occasional problem with case and syntax leads me to believe the author may not be a native English speaker, either that or a number of suffix "s" and "eds" got lost somewhere along the process. The manual does a good job of describing a very complex communications control system. Of course no one is perfect and this manual could have used a better job of proof reading but this small defect is overshadowed by the existence of the INDEX! Now there are quite a number of ham radio equipment manuals that I have not seen, so it would be unfair to say that the Kalt manual is the first with an index. So, how say you gentlepersons, does anyone know of a manual with an index? And, what is your nomination for Technical Manual Of The Month?

Next issue we will illustrate a neat and simple method of connecting a ST-6 demodulator to an IBM PC clone for RTTY transmit, receive, and also provide xcvr/linear amplifier control and switching. This all courtesy of Bill, W6OWQ. Until the September issue, very 73

de Cole, W6OXP

ADDRESS CORRECTION REQUESTED

If you are going to move soon, please let us know here at the Journal. We mail the Journal on or about the twentieth of each month and can make your address change right up to the last minute. But, we need to know! It is very costly to send you an issue via first class and we are charged first class for each issue returned to us. So please help us keep the postage cost down. Thank you for your cooperation.

ON THE OCCASION OF 11 MILLION POINTS

We typed till our fingers were bloody,

We stared at the screens amber glow-

It was Demon DX,

We were snared by here hex

And lived only to make the QSO.

We harried them on across twenty,

We felt neither pity nor pain -

We gave and we got, Went cold and got hot

TTY from sublime to profane.

We routed out (2 New Guinea,

We caught 7X on the run,

BY was a jewel,

Missed G, that was cruel

And after OX we were done.

We had given our best for a weekend,

We worked the DX with a will,

We took what we had -

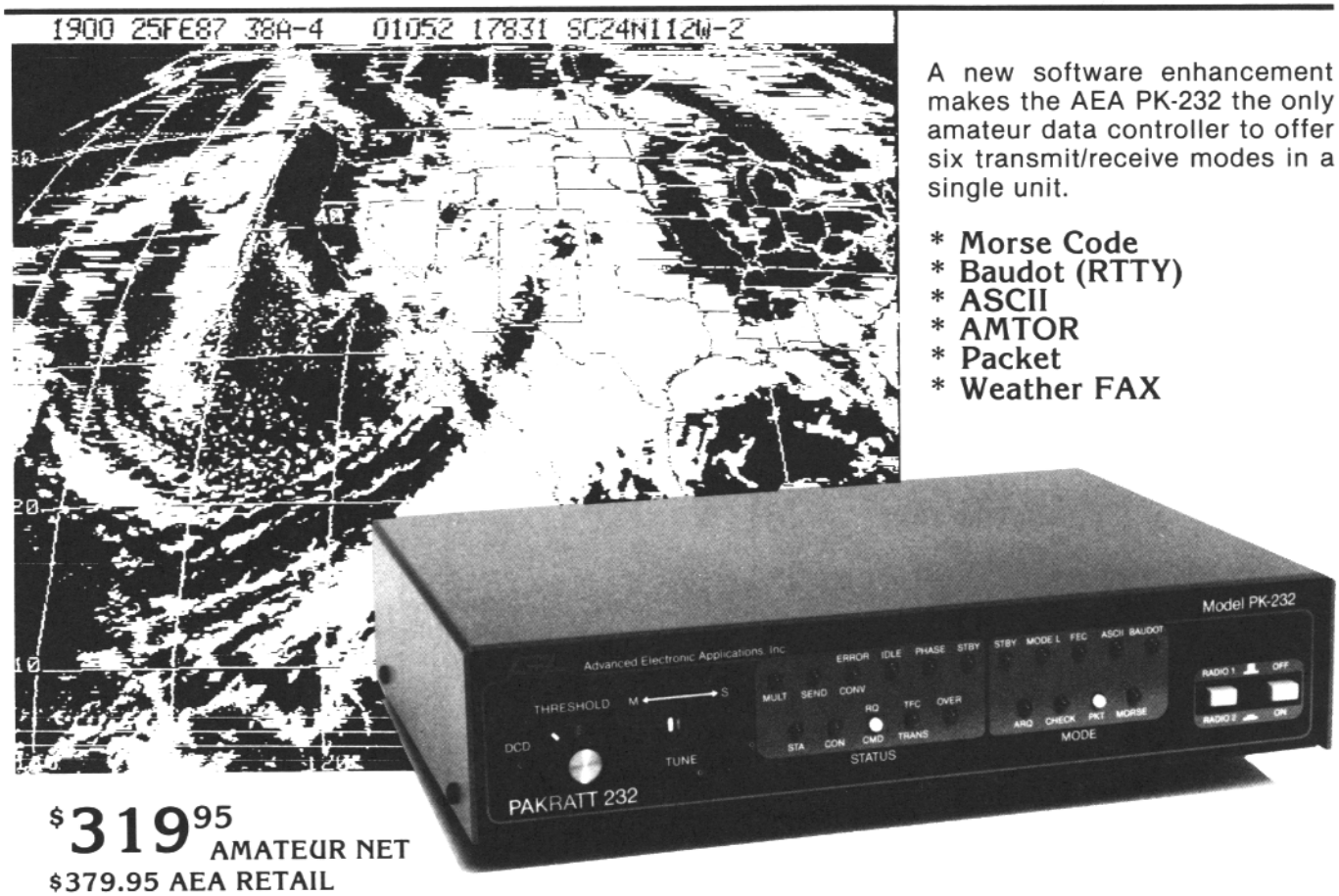
The good and the bad

And ended with nearly 12 mill.

by **NQ7M**

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
$379.95 AEA RETAIL

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

2006-196th St. SW
Lynnwood, WA 98036
(206) 775-7373

16th SARTG WORLD WIDE RTTY CONTEST - 1986 RESULTS

CLASS A SINGLE OPERATORS

NR.	CALL	QSO	POINTS	MULTIPLIERS 3.5	7.0	14	21	28	TOTAL SCORE
1.	G4SKA	245	2745	15	17	57	10	1	219,600
2.	I7FKO	267	2865	10	17	36	13	3	218,435
3.	HB9HK	230	2500	13	8	45	11	5	211,560
4.	SM5FUG	215	2330	16	11	43	9	8	202,710
5.	EA5FXI	166	1770	14	7	35	17	6	139,830
6.	WB5HBR	207	2270	--	6	48	1	1	127,120
7.	FM5CD	201	2415	--	-	52	-	-	125,580
8.	IS0MVE	172	1950	--	12	38	4	-	105,300
9.	I0ZSG	185	2000	--	--	43	7	-	100,000
10.	IN3ZUG	175	1675	1	--	51	7	-	97,825
11.	I2VXJ	122	1300	7	8	36	11	4	85,800
12.	W2FG	128	1740	-	-	44	-	-	76,560
13.	LA7AJ	127	1490	-	-	40	7	-	71,520
14.	OH2BDN	132	1270	1	-	35	7	-	54,610
15.	OK2FD	87	965	11	6	26	2	1	44,390
16.	CT4KO	96	975	1	1	29	9	2	40,950
17.	W2JRG	97	955	-	-	39	-	-	37,245
18.	I0KKY	105	1105	-	-	32	-	-	35,360
19.	CT1BRG	78	765	1	4	27	10	2	33,660
20.	Y39TO	83	835	1	4	28	5	1	32,565
21.	PA3DBS	100	1180	-	-	27	-	-	31,860
22.	VE1ASJ	89	1045	-	-	30	-	-	31,350
23.	DJ1XT	74	945	-	-	32	-	-	30,240
24.	OZ2CJ	69	715	12	-	24	5	1	30,030
25.	SP2UUU/1	93	980	--	6	23	1	-	29,400
26.	K6WZ	82	800	1	5	30	-	-	28,800
27.	Y21RO/A	68	685	11	5	23	1	-	27,400
28.	OH2BUQ	78	780	--	-	28	6	-	26,520
29.	IV3UT	63	625	2	3	25	8	2	25,000
30.	OH2BYL	67	705	-	-	24	10	-	23,970
31.	SM7BGE	72	710	10	1	20	1	-	22,720
32.	SM2AIO	58	570	7	5	20	5	-	21,050
33.	GW3EHN	60	635	7	-	18	5	2	20,320
34.	DF5BX	59	615	11	-	19	2	-	19,680
35.	K8CV	55	610	--	-	32	-	-	19,520
36.	SM7ABL	50	510	9	3	17	3	4	18,360
37.	DF8WX	53	565	3	-	24	4	-	17,515
38.	KA1LMR	41	545	-	-	28	-	-	15,260
39.	Y43ZO/2	42	440	1	1	24	1	-	11,880
40.	KL7PG	38	420	-	-	22	-	-	9,240
41.	KJ4XP	46	405	-	-	22	-	-	8,910
42.	OZ7XE	40	400	-	-	14	5	3	8,800
43.	F6BVB	45	450	-	1	17	-	-	8,100
44.	W5SL	27	335	-	-	22	-	-	7,370
45.	LA7SP	29	350	-	-	21	-	-	7,350
46.	Y23VP	24	345	-	-	18	-	-	6,210
47.	EA3AW	25	265	-	-	15	3	-	4,770
48.	ZL2AKI	21	270	-	-	9	6	-	4,050
49.	SP3XR	25	265	-	-	13	-	-	3,445
50.	OH1TD	24	245	-	-	12	-	-	2,940
51.	YU3MJ	15	150	-	-	14	-	-	2,100
52.	W8LNK	16	175	-	-	12	-	-	2,100

CLASS A SINGLE OPERATORS

NR.	CALL	QSO	POINTS	MULTIPLIERS 3.5	7.0	14	21	28	TOTAL SCORE
53.	PA0YN	19	190	---	---	10	--	--	1,900
54.	SM4CMG	13	135	4	---	7	1	1	1,755
55.	DK5KJ	16	160	---	---	10	--	--	1,600
56.	SM0KV/0	14	140	---	---	--	10	--	1,400
57.	OH7AI	12	130	---	---	9	--	--	1,170
58.	PA0KHM	13	135	---	---	8	--	--	1,080
59.	SM4CJY	14	140	---	---	7	--	--	980
60.	Y31MB	10	100	6	---	2	--	--	800
61.	SP7LIL	14	70	---	---	10	--	--	700

CLASS B MULTI OPERATORS

NR.	CALL	QSO	POINTS	MULTIPLIERS 3.5	7.0	14	21	28	TOTAL SCORE
1.	LZ2KIM	290	3260	11	16	50	16	4	316,220
2.	WA7EGA	244	2775	2	13	59	1	1	210,900
3.	OH2AH	201	2120	14	9	42	6	--	150,520
4.	OH2OT	122	1180	7	6	27	5	1	54,280
5.	YU2CRS	80	815	9	8	22	--	--	31,785
6.	SK6NP/6	23	230	--	--	10	--	--	2,300
7.	SP2ZD/1	6	55	--	--	5	--	--	330

CLASS C SWL OPERATORS

NR.	CALL	QSO	POINTS	MULTIPLIERS 3.5	7.0	14	21	28	TOTAL SCORE
1.	OH-100	236	2410	14	18	57	17	7	272,330
2.	DE2QRV	217	2330	16	13	51	12	--	214,360
3.	ONL-383	136	1510	6	16	42	1	--	98,150
4.	Y2-2814/M51	121	1330	10	4	38	6	--	77,140
5.	OH2-900	122	1180	7	6	27	5	1	54,280
6.	DE1GMH	84	920	10	--	30	3	--	39,560
7.	Y2-1928/164	82	900	--	--	34	--	--	30,600
8.	ONL-4003	47	500	--	1	21	1	--	11,500
9.	Y2-2784/042	320	320	--	--	19	--	--	6,080
10.	JA1-7777	10	105	--	--	6	--	--	630

CHECK LOGS: LA3VP - FG/W1QU/FS - OZ1CRL

CONTESTS & AWARDS MANAGER

Jorgen Dudahl - Lasjon - CZ1CRL
Egebjergvej 90
DK - 4500 NYKOBING SJ

Roy Gould, KT1N
P O BOX DX
Stow, MA. 01775

DX - NEWS

What with Summer here and a host of activities going on and a major project at work, my DXing has been at a real low spot. This month I will be spot lighting Jim Smith, VK9NS, and his RTTY DX efforts and also share with you some of correspondence I have received.

RTTY JOURNAL/CQ WORLD WIDE RTTY CONTEST

September 26 and 27 are the dates for this First Inaugural Contest. This really should be a great contest. Jules, W2JGR, writes that he will join John, TG9VT at John's QTH and will operate as TG/W2JGR. He will be there September 21 thru 28 - SSB and RTTY all HF bands. QSL to: Jules Freundlich, W2JGR, 17 Nassau Blvd., Malverne, NY. 11565.

Ted, HC5KA, myself, Hal, WA7EGA, and Jay, KE7PN, will journey to HC8 GALAPAGOS Islands for a Multi-Op effort also. Sounds like we ought to get a little friendly wager going to see who pulls off the bigger score!! **Let's all get into the spirit and make some contacts to kick off this contest.**

Johnson Island .. Joe, KL7LK/KH3 has been trying to get on RTTY. The equipment that is at present at the station he uses is not suited for continuous duty. In addition his C-64 is not working. What he planned to do and as far as I know did do, is that upon his return to KL7 land in June bought a new C-64. Then ship it along with his 940S and Henry 2KD amp to the Island. This will allow him to be active on RTTY for the next 6 months of his tour there. George, KL7VZ, who is Joe's QSL manager, is collecting donations to help pay for the C-64 and the air shipment charges to and from Johnson Island. If you would like to help out please send your donation to:

George M. Winford, KL7VZ,
1631 Wolverine Lane,
Fairbanks, AK.
99709-6630, USA.

All donations are appreciated and all those contributing will get a complete accounting of all the expenditures.

DXER OF THE MONTH
Jim Smith, VK9NS

"Have TONO will Travel"

(Jim Smith's lette*r)* *It would be a few years ago since I received a Letter from Gin, JA1ACB whilst I was in Papua New Guinea operating as P29JS. Basically the letter asked whether I was interested in RTTY. Since I had been in Radio Communications all of my working life, I was well aware of what RTTY meant. Noisy mechanical monsters spewing out reams of paper. Mechanical and electrical devices which always seemed to have the uncanny knack of going wrong just as some important message was on line. Over the years I had seen machines improve and with the introduction of ARQ great improvements in solid copy. However even here lots of trouble associated with ring counters using gas tubes and so on.*

No, I had to be honest, I was never really impressed but it was often good fun to copy press etc. I did of course realize that there actually were Amateurs who had these clanking monsters in their shacks. Apparently using this mode to communicate with each other on the Ham bands - strange people! So in replying to Gin I was polite and merely left the door open pointing out that I had access to lots of RTTY equipment but had never thought of using it on the Ham bands.

In due course I had another letter from Gin offering a TONO Terminal at a very reasonable figure, "hardly used", it would be great if P29 were available for a new country. Well as most know I am a DXer and I always have a soft spot for a sell like that. I have given many a new country in various modes on almost all of the available bands. As soon as the TONO was mentioned I realized that Gin was talking about the new generation of Terminals. In my profession I was well aware what could be done with IC's, VDU's and Memory capacity. So it was that in due course P29JS appeared on RTTY and gave many a new RTTY country. By this I do not mean to say that I operated day and night on RTTY, far from it. The reasons were fairly simple I was not a good keyboard operator. Years of association with many top notch operators had left me with a inferiority complex. So I continued my one or two finger hunt and peck routine. However it is admitted that now I could transmit CQ, station information, QSL information and so on with the best of them. All that was required was a little selection here and a bit of memory there and it all happened. Magic indeed! So it was that over the years I kept in touch with Gin and realized that his main interest in Dxing was really in RTTY countries. The TONO which Gin had so generously helped to provide was eventually used on Heard Island. Giving a few a brand new one from the

(cont. pg. 12)

(DX cont from pg. 11)
first ever Amateur Radio operation on RTTY from this remote Island. The callsign used was VK0JS.

Prior to Heard Island I had moved to Norfolk Island and this in turn put VK9N on the air for the first time on RTTY. Once again operation was sporadic and many worked VK9NS or VK9NL as a result of skeds or a particular request. It would be reasonable to say that many would still need Norfolk Island on RTTY. In due course as events happened I returned to Papua New Guinea for a further short term with Civil Aviation. My callsign P29JS was on the air again and there was further operation on RTTY.

On returning to Norfolk Island, the opportunity to upgrade the RTTY terminal to the TONO 9000E came completely out of the blue. Purely due to Gin's generosity. With this upgrade, we once again became more active and tried the brand new AMTOR mode for another first from Norfolk Island. With the DXpedition planned for Cocos (Keeling) and Christmas island I had decided to take along the RTTY equipment. Cocos (Keeling) would be brand new. Christmas Island had been activated previously. So it was that in addition to two rigs, linear and the usual pile of bits and pieces associated with DXpeditions. The TONO and a small monitor came along as well.

At this point in time I must apologize to the hundreds who called me operating as VK9YS. I was totally unprepared for the pile ups which were fantastic and the difficulty with European behavior. Operators would not get off my frequency, despite my "call me higher in frequency" pleas at the end of nearly every QSO. In addition I had problems with the monitor and had great trouble reading letters "O", "D", "Q" etc. and this put me off balance. I have a tape of wall to wall stations calling.

Operating from Christmas Island was better since I borrowed a Computer type 12 inch monitor and as a result had no difficulty reading the screen. So it is now that I have operated from 5 countries on RTTY and of course Heard Island would be the rarest. Kirsti and I now try to be a bit more active using the mode but we do have a great number of interests. It seems that there is always another Amateur who needs Norfolk Island on SSB, CW, Low bands, High Bands and so on. It is fun being DX but it is also hard work Hi.

The carrying arrangement shown in the photograph has worked out fine in practice. Since the briefcase is always with me, the TONO unit travels safely.

All things being equal Kirsti and I will manage a few more DXpeditions before we finally quit. Perhaps I will be able to go back to Cocos (Keeling) or better still put another DXCC country on the air using RTTY for the first time. 73 Jim,VK9NS

Jim has been a great help to the RTTY DX gang putting new countries on the air when he can. Thanks Jim for your story and we will look forward to working you again from a new one soon.

Next month we will spot-light Lucio Orlani, I2OLW. Luc is a very active RTTY contester and DXer and is also looking forward to the September RTTY Contest.

MAILBOX ... Received a nice note from Kathy, KA7IVA, she has been on RTTY for about 15 months and has 67 countries worked. Kathy really enjoys RTTY and worked me in the recent BARTG. her OM is a CW operator at a Marine coastal station. When not on the radio she is a housewife and mother of Laura age 12 and David age 9. However she notes in closing that RTTY Dxing comes before the dishes!!. Thanks for your note Kathy and your kind words about the RTTY Journal (she said she loves reading it).

AMTOR ... Our resident AMTOR watcher Tom, VE7VP writes to tell us that there is lots of good stuff on this mode. During the month of May Tom worked the following: VU2SJV, VS6TU, 9V1SS, XX9DN, 9K2CA, HL1AV, FO4LQ, VK6NB, ZS6BYG, YB5QZ, FT8WA. In addition Tom has been experimenting with different delays on the Long Path to South Africa. On the Long Path he had to use FEC mode as he could not get a link going on ARQ with any of the 5 ZS stations he worked from May 22 to 31.

It has been reported that ZK1CG on Cook Island, should be on AMTOR soon as well as YN3ACZ should be chirping about now.

Willy, HB9HK dropped me a note to say his current RTTY DXCC totals are 136 countries worked and 123 confirmed. Willy is always in there looking for the new one.

DX NEWS

Minami Torishima 7J1ACH, Rick left the Island on June 26, and after a vacation his new post will be KP4 land.

Trinidad and Tobago, 9Y4DG has been on14.088 regularly at about 0100hours.

Netherlands Antillies, PJ2WOL has been active around 0100 hours on 14.087.

Macau, XX9DN continues to give out a new one for many.

(cont. pg. 13)

(**DX cont. from pg. 12)**

Andorra, C31SD has been working a lot of state side the past few weeks.

Mali, TZ2WB has been worked over the past 2 weeks and seems to be very active.

China Report ... There should be some activity in the near future from BY land. Joe, K4IHP will be returning to BY1PK on July 25 and will be getting their PK232 system up and running. he plans AMTOR activity also. JA7OIA, JR1HHL and JA1EFT will be going to China on August 8 and plan to operate BY1PK from August 9 to 10 and then to Ranchou, BY9AG from August 12 to 13, then BT0CQ in Urumuchi from August 16 to 18th. All Digital modes including Packet will be employed. Look on 14.090 for them and QSL to JR1HHL.

Well gang not a great deal of DX info, but some interesting letters from some of our readers and good news about China. Look over the BANDPASS and see if there is something there you need. Let me hear from you!! See you next month. Good Dx.

Thanks and a tip of the hat to: Jules,W2JGR, John, TG9VT, Bill, W0LHS, Kathy, KA7IVA, Hal, WA7EGA, Jim, VK9NS, Tom, VE7VP, Willy, HB9HK, the DX Bulletin and the VK2SG RTTYMailbox. **de Roy, KT1N**

(HITS cont. from pg. 2)

DAYTON FORUM RESULT

I received a very nice letter from Craig Martin, KR6T Customer Service Manager, Trio-Kenwood U.S.A. located in Compton,CA. Craig was happy that he was able to participate in the forum and as a result was able to carry back to the engineers and company officials our comments and suggestions. Here are his words, "As a direct result of the forum Kenwood now has a much better idea of what is going on in the RTTY market, the likes and dislikes and a good idea of what is of interest to the average RTTY user." They have asked to be on our mailing list and its been done. We asked that we be placed on their mailing list as well and its been done.

Update bulletins and radio revisions as they pertain to our users will now be coming into the Journal for dissemination to you the user. And, here is some more good news, they apparently have a radio station which is going to be equipped with RTTY gear and they intend to be active in the upcoming CQ-RTTY contest in September. The station call is WD6DJY, so look for them on the bands.

KENWOOD SERVICE BULETINS

Service bulletin number 913 dated 8-28-86 covers 'Signal to Noise Ratio Improvement' on the TS940S. Service bulletin number 917 dated 3-2-87 covers 'VCO carrier to noise ratio improvement'for the TS940S. For more info on these two improvements, contact Kenwood direct, your local dealer, or an SASE to the Journal for a copy of the bulletin. Space does not permit us to cover in every detail all the items covered in these bulletins but at least you do know that information is available.

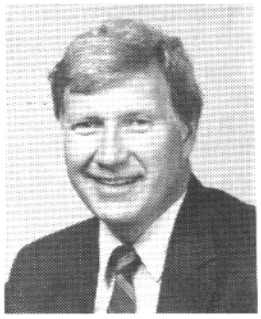
LONG TIME SWLER, JA1-3477 HAJIME SUZUKI

Hajime wrote me recently and told about his love for RTTY and other digital modes. He has been an SWL for over 25 years and has been interested in RTTY signals for about 20 years but only started receiving RTTY signals in April 1975 using a homebrewed ST-5 and a 28KSR. He is the proud recipient of SWL-RTTY-DXCC #3 from the Journal. His present system consists of the 18AVT/WB vertical antenna, HF band preamp, Tono 8-5000E, Tono 8-777 modem, and the NEC PC-100 computer. Hajime has been active in copying FAX and Packet. He predicts that with the upcoming better sun spot cycles many pictures will start being transmitted via FAX. Some very nice copies of FAX pictures were enclosed which were printed from the VHF stations in Japan. And I might add, they are of excellent quality. Hajime has also written articles for some of the US magazines over the years which some of you may have read. So, Hajime is a very special kind of RTTYer in that even after over 20 years of listening and printing he still has not made a QSO but look at his accomplishments and you see a story of an avid RTTYer. Over the years, Hajime has collected quite a few radios and has many of them still in his collection. At present he is using the Hammarlund SP-600 and the ICOM R-7000. There is a picture of Hajime's station on page ( ). Thank you very much Hajime for writing to the Journal.

DAFG NEWS

Wofgang Punjer, DL9VX was in San Francisco, CA. during the week of July 12, 1987. Wolf called by telephone and we had a nice conversation about RTTY, Packet activity in West Germany, and some news about the DAFG. The DAFG has about 800 members and is a separate organization from the DARC. To explain this, the DARC is equal to our ARRL

(cont. pg 15)



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

CONTESTING

I've always had a hunch that if four or five stations came up calling "CQ CONTEST" on any random weekend, they could start one all by themselves. That's this year's VOLTA. None of the five or six stations I worked during the contest had results from the previous year. QST announced the contest but listed the wrong rules (scoring is QSO points X Multipliers X Total QSO's, NOT QSO points X Multipliers). Last year's results and the announcement for this year's contest arrived Saturday, a week after the contest (it was postmarked contest day). Of the 54 logs received, only 5 North American stations were listed.

NORTH AMERICAN LISTINGS

WA7EGA 11,446,944 2ND Multi-Op (*)
K6WZ 767,510 9th in Single Op All Band
W2KHQ 60,792 10th in Single Op Single Band
VE2QO 31,590 14th in Single Op Single Band
W8TCO 44 23rd in Single Op Single Band
(*)*WA7EGA was mistakenly listed as single op in listings*

Single Op/ All Band			Single Op/ Single Band		
1	9HIEL	66,751,750	1	OH1AF	10,058,047
2	I2OLW	20,747,392	2	UT5RP	10,034,640
3	HB9CAL	16,237,089	3	EA6WA	1,818,048
4	G4SKA	6,269,400	4	IN3XUG	934,154
5	SM5FUG	2,963,961	5	YO3RF	520,950

Multi Op/ SingleTransmitter

1	LZ2KIM	41,517,700
2	WA7EGA	11,446,944
3	OK3KII	4,288,680
4	OK3KGI	584,820

The VOLTA could be more aptly named, "PUSH ON, REGARDLESS". I copied I2OLW with an early lead being closely hounded by OK2FR, I2HEO, G4SKA, and a couple of others. Even K6WZ was in there on temporary antennas from his new QTH in Kansas (welcome back Carl!) along with a small but energetic group of East Coast stations. The folks who contest often do it inpite of a sort of HO-HUM attitude by some of the RTTY contest sponsors who for some reason don't bother to send results or announcements to the U.S. magazines or to participants of the previous year's effort. People who contest seem to do so just for the fun of it, remembering the action and the DX while forgetting the bloodshot eyes, cramped shoulders, and cranky family members who want to watch TV (although of all the modes, RTTY seems to generate theleast TVI). You can always make up for not winning by paying your power bill in person. The standing ovation you'll get from the staffat the power company is worth it. Of course you don't have to be that dedicated to join in a contest. Even sneaking a couple of contacts induring halftime makes you a contestant. In fact, it makes you pretty important!! The hard-core stations all get around to working each other. When someone gives out a QSO number higher than 20, chances are he has worked all the guns. But the fine fellow who only worked six QSO's, ---some got him ... some didn't. His contact represents a scoring advantage for those who worked him which is irreplaceable, particularly if he is the only ZL on 40 meters! For Jay, KE7PN and I, VOLTA went from ice cream to fertilizer in the first 16 minutes. As advertised, ZL3MA came up on 7045 with the loudest New Zealand signal Ihave ever heard and was joined by VK5BB to start the contest. Working a 'cozy deal' I immediately talked them into trying 80 meters and at 1213 both were S9 on 3636. That's when the Balum on the 20 meter beam began to complain about all that 80 meter RF. An IGNO-SECOND later when I cut the carrier, I remembered the balum rule: "*under improper load condition, the kindling point in Fahrenheit of a commercial balum is equal the reciprocal of the product of the mast to feedline distance multiplied by the height of the antenna in feet*". When I got there, at 96 feet, the smoking cinder at the feedpoint was still 6 feet out of reach. So much for VOLTA.

Coming up is the 16th running of the SARTG contest on August 15/16. SARTG is one of the more civilized, 24 hour contests. It runs in three operating periods with 8 hours rest time between each period, a nice easy pace for a single-op effort! Good looking, 11X14 blue and gold certificates to the top scorers in each country and W/VE/VK call districts. OZ1CRL is also an excellent contest manager. He not only answers his mail but sends out the results and awards within about 30 days of the log closing date. (P.S. his XYL collects stamps).

TEST PERIODS: 0000-0800 GMT AUG 15th 1600-2400 GMT AUG 15th 0800-1600 GMT AUG 16th

SINGLE OPERATOR - MULTI-OPERATOR, SINGLE TRANSMITTER, and SWL. 3.5 - 7- 14 - 21 and 28 MHZ.Work stations once per band. Exchange RST and QSO number (beginning at 001)

(cont. pg 15)

(CONTESTS cont. from pg. 14)
QSO POINTS: Same Country (5) points
Same Continent (10) points
Other Continent (15) points
MULTIPLIER: DXCC LIST and W/K, VE/VO and VK Districts.

SCORE: Sum of QSO points X Sum of Multipliers.

Logs must contain Band, Date, Time in GMT, Call-sign, Exchange, Points and Multipliers. Separate sheet for each Band and a summary sheet showing Class of Operation, Name/Callsign, Address and Signature of each operator (Multi-Op) and Claimed Score. Comments are appreciated.

SEND LOGS by OCT 10, 1987 TO:

OZ1CRL, Jorgen Dudahl-Lasjon Egebjergvej 904500 Nykoning SJ. Denmark Europe

Keep thinking about the CQ-WW RTTY JOURNAL contest which should already have a circle around 26 September on your calendar. Rumor has it that W3HNK, W2JGR and TG9VT are putting together a multi-op effort from Guatemala and KE7PN, WA7EGA, and HC5K are teaming up for an all out effort from the Galapagos Islands for this one. Keep track of this contest as it should be a chance to work some rare ones. See you next month,
de Hal, WA7EGA

(HITS cont. from pg. 13)

organization while the DAFG is made up primarily of digitally minded Hams. In this organization are Hams interested in RTTY, Packet, SSTV, WEFAX, and so on. Their newletter covers the digital modes only just as the Journal does. Wolf also transmits Bulletins along with a station in the Netherlands on a regular basis which covers news about the digital modes plus other information regarding Ham radio. He plans to help us promote the upcoming CQ magazine/RTTY Journal RTTY contest as soon as he is back home. Our thanks for all your help in this regard Wolf. While on this subject of the contest, I would like to remind everyone that if you enter this contest and send your log in to CQ magazine, you will receive a certificate. Wolf is going to send me more information concerning Ham radio activity in West Germany. I enjoyed talking with Wolf and was only sorry that I did not have time to go to San Francisco to have an eyeball QSO with him. Thank you for calling me Wolf and giving me information to share with our readers.

WILLIAM (BILL) JACKSON, W6OWQ

Bill wrote telling that he has been a Journal subscriber for many years but had never written in before. His letter was a result of my inquiry in a recent issue. Bill said his favorite editor of the Journal was the late Merrill Swan and remembered how Merrill helped so many Hams get on RTTY. Bill's station consists of an IBM (trademark) clone, TS-940S, ST-6 (original Irv Hoff version), and his special antenna system which is shown in picture (1). Bill had a little bit of trouble interfacing all his gear but he came up with the right combination which will be covered soon in the "Connections Column". Since Bill lives in a canyon he was faced with a big antenna problem but he solved it as you can see from the picture by having a friend climb a little pine tree (150 feet high) and installing a small tower with rotor and KDT34A beam. He then added some dipoles to cover the other bands. So even though surrounded by 2000 foot mountain Bill gets out real well. During his first try he worked SM7AIA, SM4JEV, SP3HVK, ON4CK, I5FOS, 0Z2X, WA7BBK, DL2VCL, GM4UPX, and I0AOF. Thanks Bill for writing.

(HITS & MISSES cont. pg. 6)
Sorry it is so hard to follow my article but I take up the slack wherever it may fall.

Bill Jackson, W6OWQ

Small Tower - Big Tree = 150 Feet Plus

The Commodore C-64/AEA PK-64 in Emergency Communications

Robert S. Hoover, KA6HZF
1875 Monte Vista Drive
Vista, CA. 92084

THE PROBLEM WITH PRINTERS

Examination of various catastrophic disaster management roles indicates a need for printed output at almost every level.

The typical printer intended for use with a personal computer is a dot-matrix device. In order to obtain reasonably high speed, the printhead uses fairly high voltage, typically on the order of 36 to 60 volts. While conversion of the electronics of such devices to operate from a car battery is fairly simple, using 12vdc to drive the print head is not.

The most expedient solution is to use an inverter to power your printer. Unfortunately, like most expedients, there are some serious problems, the first of which is the energy budget. Real-world disaster communication must assume the loss of main utility power and be designed to operate from 12vdc power sources. Most inverters are inefficient, with quiescent draw on the order of 4 amperes. Secondly, the output of all low-cost inverters is square wave of "approximately 60 cycles per second" (Tripplite 220 watt inverter). Operating some printers from this source will damage them. In a few cases I have seen the C-64 damaged when used with an inverter-powered (ie. two power sources).

Presently, the best compromise is to spool data for printing off-line, using either the C-64 or a convenient VIC (assuming suitable software). The media is transferred from the communications set to the data processing set (actually, it's often the same device), the system is powered-down, the inverter is brought on-line, the system is powered back up and the reports are printed. This appears to offer the least chance of damage to the communication set and provide adequate management of the energy budget. Actually, it is not as clumsy as it would appear; the whole process takes only a few seconds in most cases.

ACHIEVING MOBILITY

A radio installed in a vehicle is considered to be a 'mobile communications station', whereas lugging the old Loudenboomer out to the Field Day site is an exercise of portability. Emergency service calls for both types of operation. Ideally, all emergency communication equipment should be mobile by design.

The 12vdc powered packet station described herein is amenable to permanent installation in a vehicle. Finding a suitable place to mount the printer and the video is something of a chore, but hams are marvelously inventive when faced with that sort of a problem.

The station is also completely portable; Disaster Managers will appreciate the fact that the station described above will fit quite easily into a suitcase. Being rather hardy by design, the C-64/PK-64/1541 travels very well even in soft-sided luggage so long as common sense precautions are taken. For long term storage, as with prepositioned equipment, the entire station, including a VHF tranceiver (less printer, batteries, antenna, etc.), may be stored in a sturdy box about 18" long, 12" wide, and 12" deep.

For the dedicated emergency communicator who needs maximum portability and is willing to sacrifice the ac/dc option, the 1541 may be stripped of its AC power transformer and re-packaged for a marked reduction in both cube and weight. For particularly difficult installations, it's possible to re-house the C-64 and include the PK-64 circuit board in the same enclosure.

Given that the system will operate quite happily from a 12v battery charger and use any available television set as a video monitor (although a battery operated TV is preferred for obvious reasons), you can reduce the transportable elements of the system to a package that fits easily into a briefcase .. assuming you'll be able to locate a car battery and television set at your destination.

CONCLUSIONS

While the system described herein is easily justified on the basis of improved emergency communications alone, the realities of life tell us it will be used but seldom in that particular role. However, having a computer as an inherent part of a communications station offers many subtle advantages in the everyday, non-emergency management of an emergency communications system. In addition to using the computer as a training aid it may also be used as a remote terminal, linking emergency stations to a central office during non-emergency periods. This allows the central office to maintain more effective control over the system.

(cont. pg. 17)

(cont. from pg. 16)

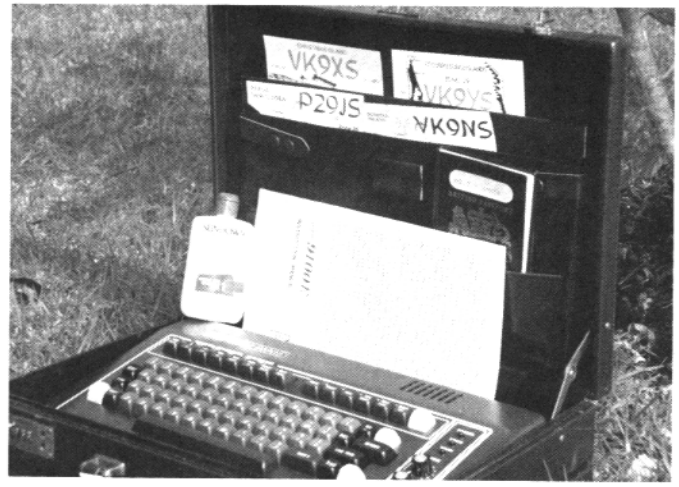
The computer also lends itself to administrative tasks at the local sites, maintaining and updating such things as plans and manuals, lists of personnel and equipment, and other paper work chores necessary for the long term efficiency of the system.

The five-mode capability of the AEA "Pakratt" coupled with the low cost and ready availability of the Commodore C-64 would appear to offer a near-ideal solution to the problem of providing fully portable, high speed digital communication sets, for emergency service.

Capable of both mobile and portable operation, the equipment suite described above is suitable as a standard package for all levels of an emergency communications network.

An extremely attractive feature of the C-64/PK-64 is its ease of operation. Although it offers tremendous flexibility, a few simple instructions are all that is needed to use it effectively. Operator experience is not a critical factor if suitable instructions - typically less than ten lines of printed information - are available at each station, assuming the operator is sighted and familiar with a keyboard.

ED: I want to thank Robert Hoover, KA6HZK for his fine article on Emergency Communications. This is the last installment of his article which was started in the January 1987 issue. Since Robert wrote his article technology has continued to advance. There have been others who have been working on similar projects. See this month's Connections column for a different approach.



Jim, VK9NS - Have TONO Will Travel

Opearating Position - VK9YS - Feb 87

16th GARTG - RTTY - CONTEST 1987 3RD PART

LOW BANDS:
SUN AUG 30th 1987 0700 - 1100 UTC
BANDS: 80 and 40 M.

VHF:
SAT AUG 29th 1987 1200 - 1600 UTC
BANDS: 2 M. and 70/23 CM.

CALL: CQ GARTG

EXCHANGE: RST, QSO #, NAME, QTH.

For more information contact: Wolfgang Punjer, DL8VX, P.O. BOX 90 11 30, D-2100, Hamburg 90, Germany or an SASE to the Journal.

KANTRONICS ANNOUNCES KANTERM

Kantronics is now offering a comprehensive terminal program for use with Commodore 64 and 128 computers. The unit offers all the feature Amateurs have been asking for, like split screen display, message buffers, disk storage, type ahead buffer, and more. The suggested price is $29.95, for more info contact Kantronics or your local dealer. Tell them you read about it in the Journal.

DX BANDPASS

CALL	FREQ	TIME	DATE
4X6RA	14.096	2115	6 - JUN
9Y4VU	14.081	0200	3 - JUN
9M2SS	14.097	1400	17 - JUN
9M6MO	14.090	1300	4 - JUN
A35PP	14.087	0700	7 - JUN
C21FS	14.084	0700	7 - JIN
CN8BX	14.086	2300	13 - JUN
CN8EL	14.093	2245	7 - JUN
DU1AUJ	14.088	1345	11 - JUN
EA8QZ	14.086	2330	12 - JUN
EA9JV	14.087	1930	5 - JUN
FT8WA	7.082	0300	6 - JUN
HI8EL	14.092	0130	13 - JUN
HL4IID	14.085	0830	13 - JUN
J73EH	14.082	0150	3 - JUN
	14.082	0030	4 - JUN
KG4SG	14.091	1230	6 - JUN
OZ2XO	14.096	1000	6 - JUN
P29JD	14.096	0700	14 - JUN
PJ8DFS	14.090	1730	5 - JUN
PZ1BS	14.086	0120	7 - JUN
TL8CK	14.089	2330	15 - JUN
V44KT	14.083	2230	4 - JUN
V85DU	14.085	1020	21 - JUN
V85HG	14.085	1030	21 - JUN
VU2SJV	14.086	1530	21 - JUN
	14.094	1450	12 - JUN
VU2IJ	14.081	1450	8 - JUN
XX9DN	14.078	1530	18 - JUN
	14.093	1630	6 - JUN
YB2BGZ	14.092	1350	17 - JUN
YB5NOF	14.082	1455	19 - JUN
ZK1CG	14.082	0320	9 - JUN
	14.093	0330	10 - JUN
	14.078	0400	9 - JUN

NOTE: The zone 23 operation by UA0Y/UZ9FWA has ended, hope all who needed this one, got it for their WAZ RTTY I know it was Gin's, JA1ACB last one.

SEPTEMBER 26 - 27 ********* MARK THAT DATE ON YOUR CALENDAR TODAY. THE CQ MAGAZINE/RTTY JOURNAL RTTY CONTEST TAKES PLACE. YOU DON'T WANT TO MISS THIS NEW CONTEST TO RTTY. EVERYONE WHO ENTERS AND SENDS HIS LOG IN PER THE RULES WILL RECEIVE A VERY BEAUTIFUL CERTIFICATE. THIS IS THE INAUGURAL CONTEST AND THE ONLY TIME EVERYONE ENTERING WILL RECEIVE THESE CERTIFICATES. ALSO REMEMBER THIS WILL BE A GOOD CHANCE FOR YOU TO WORK SOME RARE DX STATIONS THAT NORMALLY WOULD BE HARD TO FIND AND WORK. SO LET'S ALL GET EXCITED ABOUT CONTESTING FOR THIS BRAND NEW RTTY CONTEST AND MAKE IT A REALLY BIG YEARLY EVENT. AGAIN SEPTEMBER 26 - 27, 1987. SEE RULES IN APR ISSUE OF THE JOURNAL AND MAY ISSUE OF CQ MAGAZINE.

CLASSIFIED ADS

30 words $3.00, additional words 5 cents each. Cash with copy.
Deadline for copy is 1st of month for following month

ANTENNAS - G5RV Kit $29.95, KT5BA Multi-Band Ant. 160M -10M only $49.95, Antenna Accessories, Roller Inductors, Bal -Feed line, Coaxial Cable Weather Boot kit $9.50 + MUCH MORE! To Order Call 805-646-9645,-- for Catalog, Write, Kilo-Tec, P.O. BOX 1001, Oak View, CA. 93022

FOR SALE: TRX TS-520 Excellent Condition, in original box with Mic. and Manual, Price $300.00. EXL 5000E TONO, Excellent Condition, in original box for CW, RTTY, AMTOR, Price $300.00. 12" Monitor for TONO $50.00. Call (914) 754- 8487, after 6:00 PM.

NEWS - NEWS - NEWS Amateur Radio's Newspaper "WORLDRADIO". One year subscription is $11.00. Contact: WORLDRADIO, P.O. BOX 271309, Escondido, CA. 92027-0770

FOR SALE: POLYBAUD, New English/Russian Baudot RTTY receiving program for the Commodore 64. Receives all standard speeds 50- 132 wpm, toggles between English/Cyrillic alphabets while receiving, has 20K plus character buffer and prints in either alphabet to Gemini SG-10 w/Cardco interface. Handy on-screen tuning and received byte displays. Compatible with MFJ-1225 or similar demodulator connected via RS-232 port. Disk and instructions $39.95. Steven D. Jones, 112 South Plain, Ithaca, NY. 14850

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.

FOR SALE: DOVETRON TU Model 1000CR with LED Cross. Complete manual, like new condition, $500.00. ROM 116 Interface TU to TRS 80 Model III or IV, $50.00. Call (714) 821-3245 after 5 PM on week days.

HAM RADIO magazine: The no nonsense "state of the art" technical magazine. Subscribe now and see for yourself. One year $22.95 USA, $31.00 Canada and Foreign surface, $37.00 AIR to Europe, Africa, Japan areas. Contact: HAM Publishing Group, Greenville, NH. 03048

RTTY FREQUENCY LISTS AND BOOKS: We have a complete selection of worldwide RTTY frequency books and lists. Press, Weather, Government, clandestine, etc. Write for free Catalog. UNIVERSAL ELECTRONICS, INC. 4555 Groves Rd., Suite 13, Columbus, OH. 43232 (614) 866-4605

HENRY RADIO, RTTY HEADQUARTERS for all your needs in the world of digital communications, is overstocked with used equipment. We have HAL 3100's, MPT/MSO's, Demodulators, and the latest new pieces in stock (ST-8000, DS- 3200 Computers, Multiplexers, etc.). We also have some used ROBOT RTTY and Slow Scan TV units. Complete line of Advanced Electronics Applications (AEA), used CP-1, PK64, and the newest PK-232 all band, all mode, all Computer system. Also UDC-232 (use your own demodulator or TU). Call HENRY RADIO at (213) 820- 1234 in Los Angeles, or 1-800-421-6631 outside California. Ask for George, AB6A

(PACKET cont. from pg. 3)

in the world won't teach you as much as you could learn by getting on one of these Packet mailbox systems and running it through its paces. You will find it easy, enjoyable, and a valuable tool to keep you informed not only in Packet Radio, but in other areas of Amateur Radio. Any specific questions or problems about the system can be easily be fielded by the BBS SYSOP. You have to remember that they are investing a good chunk of money in computer equipment, TNC's and radios and plopping them all down on a frequency and taking the time to see that it runs well. I am sure that most will go out of their way to see to it that the newcomer is comfortable with the system he supports.

So that is it for now. Enjoy this wonderful corner of digital communications. Whether it be DXing at 45.45 baud or receiving files at 1200 baud and hoping you have enough disk space (Hi!) and everything in between. 73's for now. **de Danny, N6IHQ**

RTTY JOURNAL
9085 LA CASITA AVE
FOUNTAIN VALLEY,CA
92708

SECOND CLASS
POSTAGE PAID
SANTA ANA,CA
92799-9998