RTTY JOURNAL

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AMATEUR RADIO TELETYPE - COMPUTERS - PACKET

VOLUME 37 NUMBER 4 APRIL 1989

QSO's from LACCADIVES

VU7 GANG AT COCHIN BEFORE LEAVING FOR BANGARAM ISLAND
ROM, VU2RUM - BABY, VU2BCM - JS, VU2JX - BERNIE - VIDI, VU2DVP
(Picture taken by Nat, VU2NTA)

IN THIS ISSUE

RTTY JOURNAL

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HITS & MISSES

WHERE DID THE MAIL GO!

On occasion, I have received mail from readers asking about the publication date of the Journal. It seems they never know when the Journal is going to reach them. I don't know if I can satisfactorily answer this question because there are some variables which I have no control over but I'll give it a try. First off, I ask our staff to have their articles to me by the first of the month of publication. This does not always work out and on a few occasions I have actually received an article or two on the thirteenth of the month. This puts me in a bind because I try to have the Journal ready for the printer by the fifteenth of each month. The printer takes anywhere from five to seven days to finish the job. I rush to pick it up and mail it the same day if possible which is usually on the twentieth of the month. Once in a while I can't make that deadline and the Journal might go out a day or two late.

At this point you can see two variables which I can't control completely. As for the staff, I know they wait until the last minute so they can have the latest news for you and sometimes they are late because they lack material to write about. Which brings up an important part of the Journal. Our staff would like to write about things you want to know about but here is another variable, if you don't write to them then they must dig on their own. Why not take a few minutes of your time and write to your favorite columnist and see what response you get. I know full well that if you do, the keys on his keyboard will be smoking from activity.

The last variable I face is the U.S. postal service. All the domestic Journals go out via second class mail which means they get delivered after first class has been handled more or less. Most of the time, the Journal moves quite fast and I get good reports on delivery to most of you. But, there are months when it seems to take forever. It is just something that happens and I know of no way to control it other than switch over to first class which would be very costly.

As for foreign mail. There are two ways available: one, is to use foreign surface mail which is the same as second class. It is very slow, because in most cases the mail goes by ship, need I say more. Second: Air mail. This is by far the fastest way for our foreign subscribers to get their copy of the Journal each month and most of them use this method.

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CONTESTING

BANG GOES THE SUN

Solar activity, always a dice roll, came up snake-eyes for BARTG. In the doldrums of a couple of years ago, if we had flux in the 80's, we were ecstatic. Now, with the top bands wide open, QSO totals above 1000 could be expected but the price of all that solar activity is flares. Stations in northern latitudes were severely taxed, this year, by the series of eruptions immediately preceding and during the BARTG.

In southern climes, it was largely "business as usual". **TG9VT** operated what was apparently a successful defense of his last year's winning effort with an estimated score of a million-plus. **HC5K** seemed largely unaffected by propagation with over 700 QSOs and **4M5RY** didn't seem to be suffering much.

On Sunday morning, I listened to **KB2VO/4** in Florida work 15-meter stations that were just rumors from the Northwest. North/South paths prevailed. **W3LPL (W3EKT)** and **4U1UN** were doing about as well as any North American stations that I heard. **LZ2KIM** lead the pack from Europe with over 600 Q's in the multi category.

A real surprise was the last minute multi-op addition of **VU7JX** who received special permission to operate RTTY just for the contest weekend! From the time he came on the air he had a pileup that at times was over 10 KHz deep.

For the winner's circle, I vote **VU7JX** multi-op and **TG9VT** for single. For losers, the fellow who demanded to know why BAUDOT was being used below 14080 gets my vote. **VU7JX**, operating split and listening down from 14079, created quite a crowd. Mr. AMTOR (he refused to identify) was last heard running up and down the band trying to QRM stations who were already stacked 15 deep and who were listening elsewhere. Must have been a lonely vigil.

QSL TROUBLE

The other day I got a letter from a reader who had been working DX in contests but was having trouble getting returns on his cards.

First of all, unless you are still working on some of the common European countries, sending a naked QSL via the bureau is akin to the old message-in-a-bottle trick. Although some DX stations actually return cards received through their bureau, the oldest DX veteran in our club summed it up. "I stay away from the bureaus, these days," he said. " I don't figure to live long enough to get a QSL." (Shades of BOX 88.)

QSLs have become a business. DXpeditions and equipment for rare locations are often funded through the QSLs and it has become the norm rather than the exception to require a self-addressed envelope and a "green stamp" (dollar bill) with a QSL request. Unfortunately, the phrase "All the market will bear" has been applied by at least one of the European QSL managers who is putting his kids through school by charging $2.00. If you only send a dollar, he apparently pockets the buck and pitches the card. (*VIVA LA FRANCE*!) Although greenstamps can make a DXCC pretty expensive, it is about the only way to get your return rate above fifty percent.

A word on US cards. There are still a lot of RTTY people who would like to have their 5-band WAS confirmed and 10 meters is a relative new band for some of us. If the card is worth filling out, it is worth a pair of envelopes and return postage. Although most of us answer cards, even without envelopes, the easier you make it on the sender, the better your chances of getting a speedy return.

Despite our national debt, in many countries the buying power of the green-back on the local economy can adversely affect the integrity of mail delivery. DO NOT put call letters on envelopes. Type addresses and try to make it look as official as possible. Always use security envelopes through which the contents cannot be determined by holding it up to the sun and tuck the dollar into a secure place where it can be seen only when the DX operator removes your card.

International Reply Coupons are supposed to address mail theft and currency problems but last time I looked, an IRC was nearly a buck and was only good for surface mail (read that as several months for the return trip). Airmail takes at least two IRCs and some countries won't honor them at all.

South America has a very active social structure involving their radio club stations (where their QSL bureaus are located). If you have no joy from the individual, sometimes sending the the whole greenstamp package to their bureau will work. Box numbers in post offices are better than street addresses.

Persistence works. I got no returns from several cards sent to a Portuguese station. After a year or so, I finally made up a card on the computer using Print Shop. I put his call on it and added the QSO info and a green stamp. The whole package went to his national QSL bureau (CALL BOOK) with a note asking if they could get him to sign it and mail it back. This must have embarrassed him.

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By return mail I got an 8x10, full-color, four-page, brochure QSL with so much colored Gothic script that it looked like page one from a Vatican Bible.

It might be worth a trip to the local stamp shop where $5 buys a big package of old US stamps. Get some little cellophane sacks while you're at it. With every QSL, send the dollar and add a pinch of stamps. A lot of hams collect stamps and even if they don't, they know somebody that does. When I started this, it boosted the return rate to almost 100 percent, shortened the turn-around time to about three weeks airmail and I even got back a couple of packages of foreign stamps which brought great joy to my collector friends.

Even if your card shows a living color reproduction of your dog sending RTTY and it cost you $700 per thousand to print, the chances are that unless you are rare DX, it's going to wind up with hundreds of others, stuffed in a shoe box in some closet. What the fellow answering your card would probably prefer is a simple card with all the required information clearly legible ALL ON ONE SIDE of the card. DXpeditions often have to process more than 10,000 cards and when they get to your's, you don't want any of the info, ESPECIALLY YOUR CALL to be miscopied when a tired manager has to flip from one side to the other to read your information. If your prize card from Kingman Reef is addressed to **WA7EGE** and your call is **WA7EGA**, you just wasted your time. Another good way to get your cards messed up is to send a DXpedition six cards covering you and your wife's contacts on four bands, all in one envelope and expect a single SASE and a dollar to cover the whole shot.

Finally, if all else fails, talk to **TG9VT**. John is probably as active as anyone in the RTTY DX community and if there is anyone who can tell you a route or how to get a card, I would bet on John. (If you expect return mail, an SASE is the rule!)

VOLTA !!!

Announcement in hand, TEST PERIOD 1200 GMT SATURDAY 13 MAY until 1200 GMT SUNDAY 14 MAY.

Unfortunately, the date mixup left a lot of the North American stations wondering where the contest went last year. This year we can do better! At least **K6WZ** got it right. Congrats to Carl for 6th place in the single- op, all band class and also to **WA8FLF** for 12th in the 20 meter class. These were the only two NA stations listed.

G3UUP nosed out **LZ2KIM** strictly on 15 meters for first place multi-op. This is a ZONE CHART contest but with limited band time and every added contact being multiplied back through the score, efficiency of operation can make all the difference. For North Americans, the hunt-and-pounce mode for multipliers and DX pays off more than in any other contest. It also possible to work more multipliers AND more QSO's but still be outscored by a station that works more DX. Think about that! (Rules, complete results and ZONE CHART are elsewhere in this issue!!)

GOOD LUCK, de HAL, WA7EGA

HITS & MISSES Continued from page 2

I hope that clears the air on publication dates but if you should have problems, I would still like to know of them. Be sure to check your mailing label for the correct address and also while you are looking, check your expiration date.

ABOUT THIS ISSUE

This month we have a very busy issue. In fact, I have had to hold some material back for next month. However, I wanted to tell you that we do not have an International Column this month primarily because I did not receive any material for one. Hopefully, we will be able to continue again next month. We are also in the season of RTTY contests which means a little more space will be used to publish rules and results of the worldwide RTTY contests. This information is published for two reasons. One, if a Ham takes the time and expends the effort of many hours operating in a contest, I believe he deserves to be recognized whether he places first or last. Secondly, even though each sponsor of a contest publishes its' own results, there is no where in any other world publication where these results and rules can be found than right here in the Journal. The Journal reaches over forty five countries now and is growing. In fact, over ten percent of our subscribers are in this category.

Because of our large percentage of foreign subscribers, even our staff has to keep in mind that they are not just writing to a domestic audience only. They receive mail from our foreign subscribers just as they receive mail from here in the U.S. So bear with us, we are doing the best we can to bring to you the best possible Journal each month.

NEW PROGRAM USE

This month I started using a newer version of the Ventura Publishing program and it is going to take some time to learn this version. I'm sure you will be able to tell as you review the pages of this issue. Some are more professional looking than others and the reason for this, is that I received some help from a good friend of mine. So I want to thank Don Royer, WA6PIR (famous for many RTTY ART pictures) for his help and guidance with this issue.

CQ/RTTY Journal W/W RTTY Contest rules and last years results will be in the next issue. Also look for another software review. See you all in Dayton. **de Dale, W6IWO**

John Troost, TG9VT
POB 296C Vista Hermosa
Guatemala City, Guatemala

DX NEWS

Just when I get finished with the BARTG contest, and half rested up, here it is time again for the DX Column. What DX am I going to miss today? My ears are still ringing from the unnecessary RY RY RY: no it is NOT needed to synchronize with a station - your Callsign will do a lot more for you!

Anyway, how did I ever get involved in those Contests: some guy wrote in the National Contest Journal that anyone over 40 did not stand a chance to place in a tough Contest, so I could not pass up the chance to prove him wrong. Besides, I had to defend my place in last year's BARTG.

Propagation in the BARTG was lousy, but that was offset by the 5 HP signal **VU7JX** put out for 48 hours, making the gang more then happy and giving some 625 "deserving RTTYers" a New Country: QSL to **W2XP** and contributions will be highly appreciated.

Though we are in the high part of the new solar cycle, when the sun spits out little balls of radio activity about four times the size of the earth, it does not help propagation much. In fact during a few days last month there was a complete radio blackout: even my satellite TV station would not receive the Playboy Channel.

I have **OD5NG**'s LOG for the BARTG and of some 160 QSOs he made, only 4 reached as far as the U.S.A. Those logs have now gone to **W3HNK** for QSL Services.

Yet, in spite of all those handicaps some very excellent DX was to be gotten this month: Heinrich, **TY9JC** did a bang-up job on all bands from Benin with some 1250 RTTY contacts (QSL via home call, **DJ6JC**) and he is not the wealthy type either and would like contributions if you can. You can give those to him at Dayton at the RTTY dinner, for which Jules, **W2JGR**, treated him to a ticket, as he had not enough left to eat.

There have been some great RTTY expeditions this year thus far, not to forget **RL8PYL** from Vietnam as **3WIA**, **KH6JEB/KH7** from Kure (I will return), **VU7JX** by **VU2JX** and his friends and **TY9JC** by **DL6JC.** And a lot more is coming!

Regardless of the poor propagation, there are openings and such goodies have been reported as **3X1SG, T5GG** (seldom), **SV9AKD, V85RM, 3DA0AL, 7P8DR, 5Z4BH** (very active), **TU2OP, BY9GA, 3B8FP, 6W6JX, 9J2KF, TK5IU, S79D, VK9NS, UC1AWW, 5V7TM** (boy, do I need that one!), **V31AV, DF9FA/4S7, A41KC, UR2FU, RL8PYL, BV2B, HV3SJ** and many others. So the DX is there: now go and get it.

DX COMINGS

All is still on schedule for **PY0SY, St. Peter and Paul's Rocks** for 3 to 9 May by the NATAL DX Group, P.O. 385, 59001 NATAL RN, Brazil, where your contributions and QSLs should be sent. That is an **All Time New One** on RTTY.

Latest info is that Yama, **5W1GP**, has delayed **ROTUMA** till 22 or 29 April, battery powered no less, but RTTY must be limited to only very few hours, due power requirements. Some time after that he plans on **ZK1, ZK3, KH0** and **A35**. I pray for him and his plans and the light plane he will travel in, ROTUMA is of course an **All Time New One** on RTTY. QSL to his home Call.

The planned expedition to **ARMENIA, UW3TT/RG1G** has been delayed till 15-20 June, mainly 10 meters. Instead a German Operator, Member of the Red Cross has appeared as **DL1OAX/UG6**, Rainer, from Sthepanavan, near Erevan, Armenia, who plans to be active at unpredictable times as relief work permits, till late April. QSL to his home Call and phone me collect if you spot him.

UA3TT is also planning to go to **UA3TT/RF1F, GEORGIA**, in early June and to **UA3TT/RH1A TURKOMAN** the end of June, mainly on 10 Meters. Great! And his QSL cards for **UW3TT/UJ1J** are now being mailed.

REVILLA GIGEDO is still on schedule for 11 to 19 April. We can only bend our heads to the Almighty to ask for a proportional part of RTTY. The skill is there: **XE1L**, an A-1 RTTYer. And again this will (would) be an **All Time New One**. Listen for **XF4L** and QSL via **OH2BN** if you make it.

As I write this, **ZS6PT** is on the way to **MARION ISLAND** for 14 months as **ZS8MI**. He turned down the loan of RTTY gear from the **West Coast RTTY DX Association** (yes there is such a thing, tell you in May JOURNAL) and instead bought his own Multimode unit. Guess **W6PQS**' speech evidently made impact. I hope that by the time you read this he will be on the air, one mode or another.

Seems that **TK/HB9CJC** will be active from **CORSICA** from June 4 to July 2nd, but in the meantime **TK5IU** is doing a darned good job keeping us all happy.

From all I hear **ANGOLA** is still very much go and on schedule, probably as **D2ONU**, starting August on all modes, by **I5DEX**, Mario, who is scheduled to be assigned there at that time as part of the U.N. peace keeping group.

The Expedition to **OGASAWARA** by **7J1ADJ,** Joe, has been delayed. This is a rather complicated affair as Joe has to get leave of absence and permission for the trip from his Com-

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DX NEWS Continued from page 5

manding officer in Okinawa and once that is given, he has to get a special Coast Guard permit from Ogasawara to operate. He told me that now the trip and RTTY Expedition have been delayed till late April, or May. Joe has now planned for almost a year! Good luck Joe!

The mystery with **ZL2AMO**'s schedules has been solved: Ron has delayed the **NORTH COOK** operation till late May or early June and instead will go to **WALLIS ISLAND**, **FW0BX** from 6 to 26 April. Ron has limited RTTY experience but owns the gear; so if you see him on his favorite mode, CW, and can work about 75 WPM, beg (don't ask) him to QSY to RTTY. Think that this again is an **All Time New One** on RTTY! And Ron I know personally and he is one fine guy and a great operator.

The rumor about the **WESTERN SAHARA** and **SOUTH GEORGIA** on RTTY have not yet been substantiated, but it seems that the gear is there. But **T5GG** has been active half a dozen times in March, wish I had seen him.

HV3SJ from **VATICAN CITY** has appeared on weekends, operated by Joe, **I0AOF** with a good signal. It seems they plan for the time being to work one band per weekend. Gear courtesy of **JA1ACB**. QSL via **I0DUD**.

No further news about the TONO 5000 from Gin, **JA1ACB** for **S92LB**, Luis in **SAO TOME**.

Jim Smith, **VK9NS** will activate **OCEAN ISLAND**, also known as **BANABA** beginning close after the 1st of May. The call will be **T33JS**. The operation will be all bands and modes, definitely including RTTY. Ocean Island was formerly considered as T32, East Kiribati, but with the ARRL DXCC Rules, Jim is confident that an application for New Country Status will be approved by the ARRL. Even the Kiribati Authorities have assigned a new Prefix for Ocean Island.

VU2JX and his friends, **VU2DVP**, **VU2RUM**, **VU2NTA** and others, possibly with help of additional RTTYers, would like to operate on all bands, all modes, especially RTTY from **A51**, **BHUTAN** sometime in the next 12 months. If the financial assistance they receive for the **VU7JX** operation goes near to covering their costs, then they will make a major effort to obtain the documentation for Bhutan, which will be very hard and expensive, but not impossible. Then they will ask for Non-Indian operators to take part in the Expedition. Guess is about time that Bhutan came up in any mode. hi!

And Toru, **JG1RVN** is still scheduled for **BELAU**, **KH6**, for June. Excellent RTTY operator, who opened Taiwan for RTTY last year. You can see his picture in the group photograph on page 7, bottom, of the March Journal issue. He is the good looking guy, second from left, standing. Gin, **JA1ACB** is the one kneeling right before him on the left side.

And finally, there is **LA2FFA** operating from a floating Iceberg near about 84 degrees North with the callsign **JX0A** from 26 March for six weeks. Only on Packet though. Seems to me he should have waited till July/August.. BRRRR!

And, Ladies and Gentlemen, I cannot dream up all this forward DX news all by myself. Had a lot of help this month from **VK2SG**, **VU2JX**, **I5FLN**, **JA1ACB**, **OD5NG**, **XF1C**, **7J1ADJ**, and a lot of others. Please "Dear Reader", if you have any news you wish to share, drop me a FAX at 502-2-347249, or at Telex Guatemala 5138. Or better yet, drop a note in MSOICL on 14,085,625 Mark. Credit you do get, yes Sir!

QSLING

I had a letter from **W8OVZ**, Ted in Howell, Michigan. Thanks Ted and will do my best to answer your questions here. There may be more people interested in successful QSLing... if not, turn the page.

To begin with, Ted, there are numerous ways in which one can QSL. It all starts with the card you send the "Rare One", whom you wish to convince to send you one in return. Well, he has to receive your QSL first. Sending them to the Bureau in his country is seldom the best way. Many a time a Ham in a foreign country does not belong to a Club and then the card just gets lost. In other cases Bureaus in some foreign countries are not very efficient. In some of these countries the card will get lost, even if the guy you write to belongs to the Club and if the card gets there at all. And by that I mean; don't show a callsign on the envelope, if you include money; fold a black piece of carbon paper in with it, so that the Postman in that country does not feel he finally found a way to make up for that raise he did not get last year. You must realize that in many countries, especially the one you would like to get a rare QSL from, a dollar or a few IRCs are able to buy a family meal. Ted, I was lucky to get your letter.. your call and mine showed.

Now, a far better way is to send your QSL to a Manager if the guy has one. When you mail your card to a Manager be sure to include both a SASE and sufficient postage to cover his mailing cost. Remember that in Germany and France and such countries Air Mail Overseas costs more than one dollar.

Excellent QSL managers like **W3HNK**, **F6FNU**, **F6ESH**, **VK9NS**, etc. and you cannot go wrong. Realize though that these QSL Managers cannot do a thing until they receive the Logs from the DX station, so it may take some time. The next best way is to QSL Direct, if you were able to obtain an address from the station when you worked him. If not, look in the Call Book. If that does not result, there is an excellent list of QSL addresses and managers published monthly at nominal cost by **W6GO**, commonly known as the "Go List". Otherwise, the most informed source is **INDEXA**, a DX info net that meets daily except Wednesday on 14,236 SSB at 2330 Z. They will do their darnest to obtain a valid QSL route for you.

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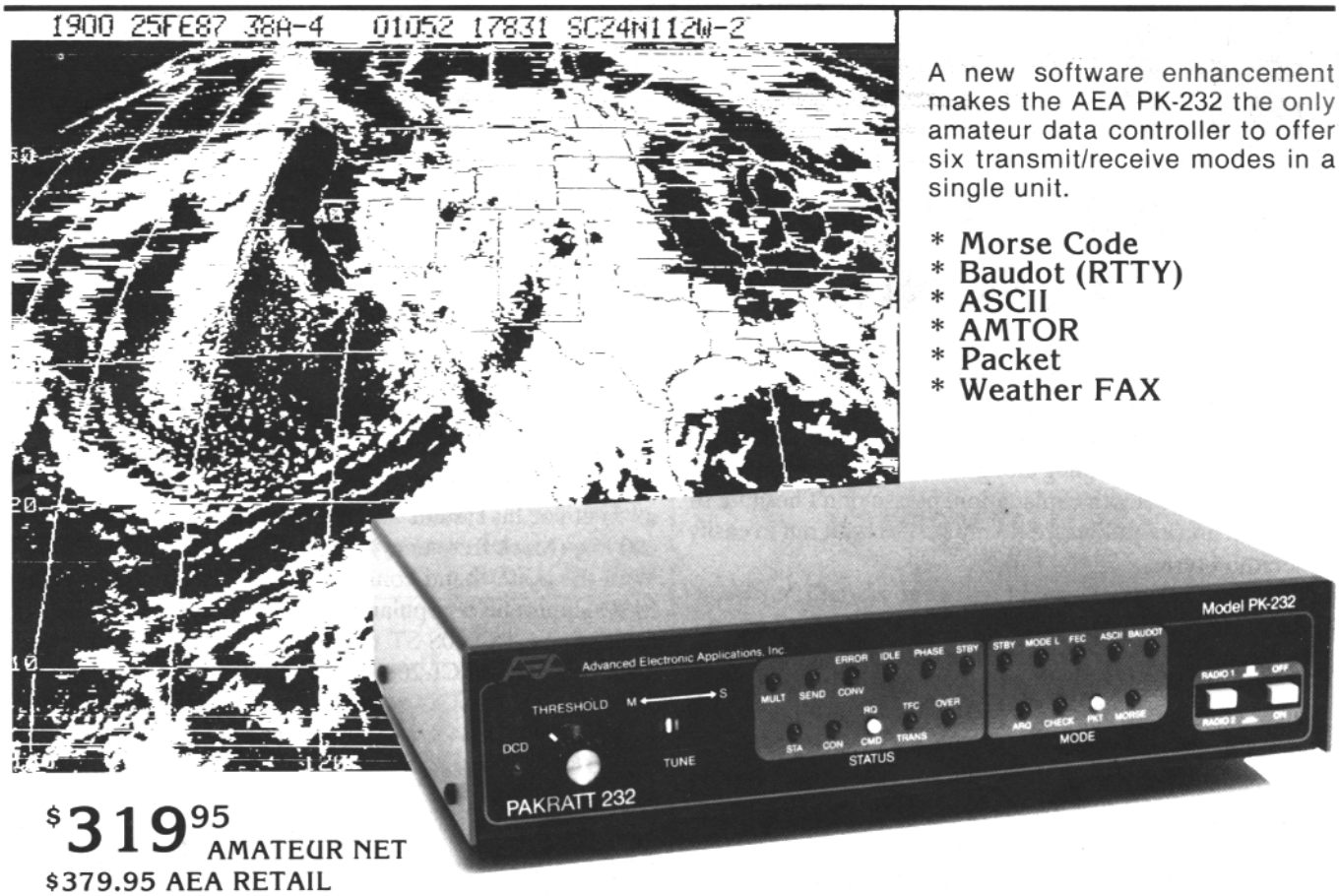
New PK-232 Breakthrough

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.

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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.

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MSO'S

ALL ABOUT MSO'S PART ONE

I've had several requests recently for a series of articles to explain the use of the MSO's, where to find them, how to exploit them, and generally what they are all about. So, with this months MSO Column I hope to provide just that information. If I miss something along the way, or you would like to see a more in-depth explanation, please don't hesitate to drop me a note, and I'll sure do my best to lay it out in easily understood terms.

First of all, just what does "MSO" stand for?

The term "MSO" simply means "Message Storage Operation", a name developed by the HAL Communications Corp. of Urbana, Illinois, to describe their RTTY message mailbox and traffic relay option equipment.

Back in the late 1970's, a group of RTTY enthusiasts began congregating on 14 087 625 Hz, (now more commonly known as the "National Autostart Frequency"), on a daily basis. This group slowly developed into what was then known as an "autostart" operation, where RTTY signals on a specific frequency were all that was necessary to cause a local RTTY Printer to activate, and hard copy of signals was assured. Sensing the need to exploit microprocessor technology, and update their already sophisticated DS-3100 ASR equipment, the HAL Communications Corp. decided to develop a "electronic mailbox", that would be compatible with the DS-3100. From that developed the HAL Message Storage Operation (MSO), as we know it today, as well as the Traffic Relay Option, (which was designed to aid in the relay of numbered traffic).

MSO's are what you, the remote user, make them. Originally there were about five RTTY enthusiasts that enjoyed visiting, swapping stories, and just generally keeping up with each other, that met each day on 14 087 750 Hz. From that casual beginning, grew an active "autostart" operation, and from there the National Autostart Frequency, with over a dozen MSO's from all over the United States, and one in Guatemala City, Guatemala. But it's really the remote user who sets the tempo in any electronic mailbox, for it is he who either finds the interest and usefulness of the system to his liking, or he moves on to something else. The MSO' on 20 meters, with which I am most familiar, and specifically those on the National Autostart Frequency, provide a variety of services to the remote user. However, head and shoulders above all else is the social aspect of the MSO's, which provide a place for friends and acquaintances to store, read and retrieve messages on a delayed basis. It is this simple aspect of the MSO's that provides the SYSOP (System Operator) with a sense of gratification for the time, equipment and personal effort in providing MSO service.

Secondly, the MSO's provide information on a variety of subjects, technical information, DX bulletins, new equipment, and other items of general interest.

Next month I'll talk a bit about where to find MSO's, how to best utilize your equipment while using the MSO's, and some of the tricks of the trade.

NEW 10 METER MSO

Jay Roman, KB0ATQ, of Rapid City, South Dakota, has just started a new MSO service on 10 meters, and invites one and all to utilize his system. Jay's MSO will be parked on 28 190 000 Hz, (Mark frequency), and will operate 24 hours a day. With the better band conditions on 10 meters recently, his MSO should be a popular one. Jay's equipment consists of a Kenwood TS-940S/ST transceiver, IBM "AT" computer with the HAL PCI-2000 RTTY Interface installed, the popular W9CD MSO software program for MSO service, and a KLM KT-34XA beam antenna at 60 feet. As can be seen from the pictures (on page 9), Jay has a well layed out station, and he'll provide fine MSO service. Jay is an avid Collins Radio equipment collector, enjoys all modes in Amateur Radio, and also collects Lionel model trains. Good luck to Jay in his MSO endeavors, and give his system a shot!

RTTY MAILBOX BEACONS AGAIN

The subject of RTTY mailbox beacons has reared its ugly head again after a long time period without this problem. I have had several calls from RTTY MSO users, DX'ers and ragchewers alike complaining about a Commodore C-64 mailbox recently activated on 20 meters, that has a beacon message activated to advertise its presence on the band. This type of activity is disruptive of communications, causes a lot of hard feelings among RTTY enthusiasts, and is most certainly illegal.

This C-64 system, as it appears to have been run recently, interferes with established communications, a most serious violation of FCC rules and regulations. Automatic beacons can't discriminate between a clear channel, and one that is occupied, or a QSO that is near enough to the frequency to be interferes with. Do everyone a favor and turn off your beacon and leave it off! I encourage those who have their QSO's interfered with by RTTY beacon activity to report the particulars to the FCC Monitoring Station servicing their area.

Continued on page 9

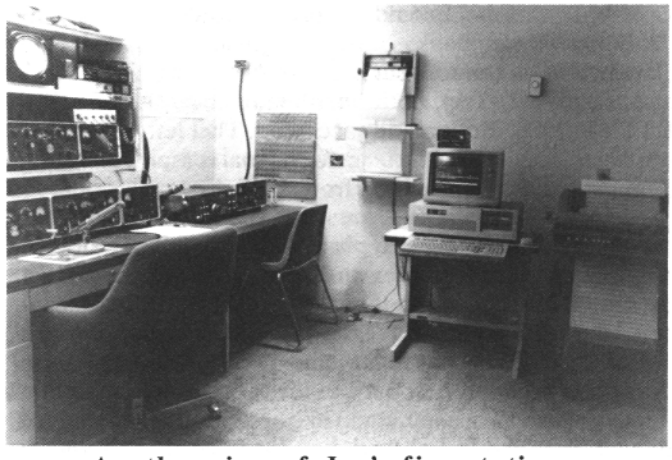
MSO's Continued from page 8

HAL ST-6000 CRT REPLACEMENT

Brownie, K5FL, of Denton, Texas tells me that Telefunken of West Germany can supply the one inch CRT to replace the existing CRT in the HAL ST-6000 Demodulator. However, the price remains very high for this tube, in the $130.00 to $150.00 range. Brownie also reminds users that the older Millen one inch CRT is a direct replacement for this tube, so we should all be watching vendors and flea markets for this item. For any further information concerning either the Telefunken or Millen CRT's, contact Brownie, K5FL, at his callbook address.

This is it for this month Gang! I'm off to Florida for a little rest and relaxation, and by the time I get back it will be Dayton HAMVENTION time. One last reminder about the RTTY dinner. Don't forget that you MUST have advance reservations for the RTTY Dinner. Tickets are NOT being sold at the door this year, so it's imperative that you contact Bob Foster, WB9QWG, to obtain your tickets. See you there! 73 **de Dick, K0VKH**

JAY ROMAN, KB0ATQ



Another view of Jay's fine station
What a great layout of Collins gear

DX NEWS Continued from page 6

One thing, Ted and that is: what do you send them? Your QSL card looks very nice, but when you sent it to a guy, who has to answer hundreds of QSLs, then it would be advisable that you have your callsign prominently displayed on the same side as the data for the QSO. A gorgeous picture with your call in it on one side is all very nice, but it does not make it easy for the recipient to pick out QSO data and quickly write out a return card. And please have date and time (GMT) correct. You would be surprised how many cards I get that are a day, a month, or even a year off.

Now, unfortunately there are stations you can only QSL direct and who do not reply, even if you put enough money in the envelope to buy them an ICOM 781... such is life.

Well, guess I could write a small book about QSLing, but Dale is getting impatient and thinks I have used my space for this month.

BEACON MAILBOXES

However, there is one gripe I have to get off my chest. This one is even worse then RY RY RY. It is the MAILBOX 64 that someone is peddling these days and is becoming popular with a few of the new operators on RTTY. One evening late March I was listening across 20 meters and there were four of them active, each taking about 2 Kcs. That is 8 Kcs out of the 20 available to the RTTYer. These unfortunate Mailboxes have no ears. Their Beacons come up on top of a QSO without regard as to what is going on that frequency. Their beacons are as long as two or three minutes and repeated every few minutes when no taker is found and the user of the frequency be dammed.

If the day would come soon that 10 of these boxes are blasting away on 20 meters, we can say good bye to that band.

Please do not encourage these boxes by accessing them. Ignore them and they will disappear...eventually!

Before Dale fires me: 73 and 88 and God bless you all. Hope to see many of you in Dayton, would enjoy breaking bread with you at the RTTY dinner on Saturday 29, April.

RYRYRYRRY de **TG9VT, John**, my Word Processor and my Spelling Checker.

A STEADY DIET OF BEACON BBS RTTY CAN BE BAD FOR YOU. THE RTTY JOURNAL RECOMMENDS YOU CHANGE YOUR DIET!

DXER OF THE MONTH

J. Srinivasan, VU2JX at operating position on Bangaram

My name is J. Srinivasan and I was born 24 Oct 1949 at Bombay. Lived all over India and East Africa. Bachelor of Engineering and Master in Business Administration. Gold medallist all the way. Run my own group of Companies. ... auto components ... first generation entrepreneur. Married, two children. XYL is VU2SGY .. Gita. Active motor rallist .. won two National events .. last 1983. Placed in many. Gave it up when I met Hams doing rally communications .. thought it was a better hobby! Seriously considering taking part in only those contests where the Zonal charts are used... and of course, when I've the time. Now more keen on making friends with Hams around the world .. instead of 599, 73's!

RTTY FROM VU7

I have been following the numerous expeditions since I got on the air in 1985. The number which made any serious effort to be on digital modes can perhaps be counted on one's fingers. And being a confirmed "digital" operator (although I can type with two fingers only), I have always been keen on doing my bit to offer digital modes from exotic spots - whenever I had a chance.

The rarity of VU on RTTY only served to whet my appetite for RTTY and pile-ups at that! So with a little more confidence gained from operating with QRM, I decided to participate in RTTY contests .. and as luck would have it, CQ and the RTTY Journal came together to have the first ever CQ sponsored RTTY contest. That was adequate to get me all fired up and promptly Nat (VU2NTA) and Lucky (VU2LBW) jumped onto the bandwagon to form the first Multi-op RTTY team from VU! For a first ever attempt, we were quite satisfied with the placing ..... with antennae that we later discovered to be better dummy loads than radiators!

When Gopal (VU2GDG) and Vidi (VU2DVP) invited me to join them in the Andamans (VU4GDG/JX) in Sept 1987, I was only too delighted to be the first one to put VU4 on the digital map!

DX-peditions are used to thinking of QSO counts in the tens of thousands, and at the end of the four day operation from VU4, it took a little bit of convincing to make Gopal and Vidi accept that we had worked more or less all the RTTY stations interested in VU4, with a total of about 800 QSOs.

The win in the ANARTS contest in June 1988 and the third place in the CQ-WW-RTTTY in Sept 1988 fulfilled our aspirations of putting VU on the board consistently. Apart from the fact that VU seldom figured anywhere in the top ten in any of the contests being a source of inspiration, another notable aspect of operating RTTY from VU is that we can expect all of about TEN (!) QSOs if we left Europe and USA out. And in any contest, as must be expected, Europe and the US are busy working themselves with 599 plus twenty signals making our breaking into the QRM a job that will test the patience and skill of the most ardent contester! Not to mention the limited potential on 40 & 80 meters!

The signals from HC5K and TG9VT in the tests had always impressed me. And then I got to meet John, quite casually, in Abdul's MSO. John had sent me a mile long telex to give the zonal point chart for the ANARTS contest, but it was not till later that we began regular exchanges through 9K2DZ's MSO on 20 meters. And although the motive of offering VU7 on RTTY had driven me to getting the permission, the story will not be complete if I do not mention John's role!

John Troost, TG9VT gives gentle nudge!

My forthcoming trip to Singapore and Australia has kept me busy and combined with the prospect of having to figure out all the logistics on my own, I had more or less decided to shelve the idea. Till I received John's telephone and long telex. The message was quite simple: If you have managed to get permission, you owe it to the RTTY ops around the world to offer VU7 on RTTY. Even if it was for 48 hours. And surely, you can find the time!

Coming from John, I could not brush it aside. I gave myself 72 hours to get back to John. I promptly asked Ron (VU2RUM - a connoisseur of the fluid bearing his callsign) and Nat (VU2NTA), both team mates from the CQ WW RTTY in 1988. Both readily accepted. That left Vidi, who I was keen on having on the team for several reasons, including the fact that he has operated from VU7.

As things began falling into place we decided to go, and the only thing that could stop us was the logistical nightmare that presented itself on account of the regular flights being canceled during that period. We had 10 days between 4th march (when the decision was made) and 14th march to organize the gear, a helicopter, a boat and the turboprop aircraft that finally got used in a commando like operation that put us on Bangaram Island in Lakshadweep (as Laccadives is known

Continued on page 11

VU2JX Continued from page 10

in India). We got the entry permits minutes before the flight. The mast had to go by helicopter and the rest of the gear by the turboprop. The boat never turned up at Agatti Island and we used the Chopper again to reach Bangaram.

We reached Bangaram at 1830 local time on 16th March. Working overnight, VU7JX was QRV at 0200 local time on the 17th. Our first QSO was on SSB with JY3|ZH, OM Zedan at 2128 Zulu on 16th March on 20 meters.

Knowing we were going to be there only till the 22nd, the station was on the air almost all the time, propagation permitting. The bean- a four element tribander with three elements on each band 10-15-20, was located less than ten feet from the water line... a dream location. The 30 foot mast that we had carried from home was just right and the rest of the gear which consisted of an Amp Supply linear, FT 757 GXs, a Tono 5000 E worked flawlessly, giving us time to concentrate on the king size pile-ups that beat all our expectations. After all, VU7APR had been on for more than 25 days by then...

We had hoped that the VU7 operation for the BARTG test would give the test a fillup, and were quite happy to see many a station come by and give us a 001 number, indicating they had come up for the test to work new ones.

Given the activity, the QRM was quite heavy. But this piece will not be complete if we do not mention the deliberate QRM we encountered... and it is quite certain that quite a few did not get through to us and in the bargain lost the opportunity to get VU7 on RTTY. Judging from the signal strength and the way the QRM did operate, we are reasonably sure it originated in Europe. It is a pity that people can be so selfish. It was exasperating to us, after the trouble we had taken to be there. I suppose we will have to live with this cancer! We believe a few other stations also encountered this problem.

WILL MISS DAYTON THIS YEAR!

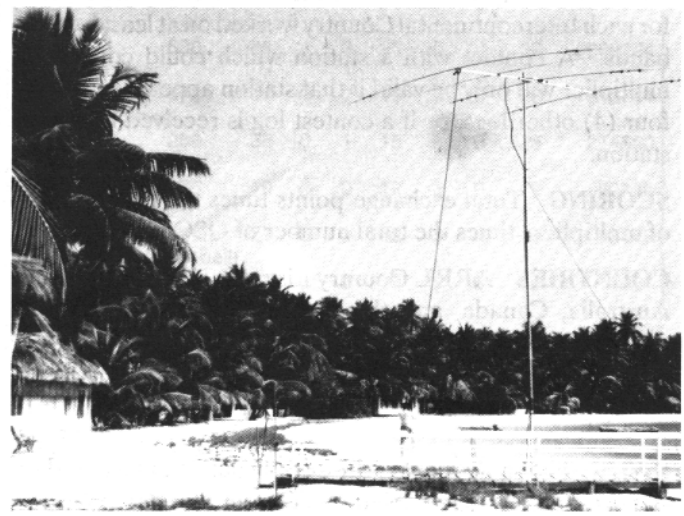
It is every Hams dream to go to Dayton, as it is mine too. But having missed it this year, I look forward to meeting the innumerable people I have met on the air from Australia when I visit there in May. I hope to be Stateside in Sept. Oct. (also Guatemala of course!) and that is another visit when I look forward to meeting with the many ops I have contacted.

We will be delighted to receive feedback from readers on the operation. Some of us here are looking for other pastures, like A51.... and any comments ... applauding as well as critical will be welcome. After all, one does want to know how one did, right?

73 and Namaskar de JS/ VU2JX
340, 5th Main, 2nd Cross
1st Block, Koramangala
Bangalore-560 034
INDIA

THE SHACK AT VU7JX

VIDI, VU2DVP & VU2JX, J.S. AT CONTROLS



ANTENNA FARM ON THE ISLAND

23RD ALESSANDRO VOLTA RTTY DX CONTEST

The SSB and RTTY club of COMO and the A.R.I. (Associazione Radioamatori Italiani) take pleasure in announcing details of the 23rd VOLTA RTTY DX CONTEST. This contest is organized in order to increase interest in the RTTY mode as used by radio amateurs and to honor the Italian discoverer of electricity, ALESSANDRO VOLTA

RULES

TEST PERIOD - 12:00 GMT Saturday 13th May until 12:00 GMT Sunday May 14th, 1989. In the future this event will take place on the second weekend in May.

BANDS 3.5 - 7 - 14 - 21 - 28 Mhz amateur bands

CLASSES **A1** - Single operator, all bands **A2** - single operator, single band **B** - Multi operator, single transmitter (list names and callsign of all operators)
C - Short wave listeners

SCORING All two-way RTTY contacts will score in accordance with the EXCHANGE POINTS TABLE (pg22).. Contacts between stations within the same country will not be valid (Example, A W2 station can work W1, W3, W4 etc. but not W2.) Contacts made outside ones own CONTINENT on 3.5 or 28 Mhz are worth double points.

CONTACTS Stations may not be worked more than once on any band. Additional contacts may be made with the same station if a different band is used.

MULTIPLIERS A multiplier of one (1) is given for each country contacted. The same Country may be claimed again if a different band is used. An additional multiplier is given for each Intercontinental Country worked on at least four (4) bands. A contact with a station which could count as a multiplier will only be valid if that station appears in at least four (4) other logs, or if a contest log is received from that station.

SCORING Total exchange points times the total number of multipliers times the total number of QSO's.

COUNTRIES ARRL Country List plus each Call Area in Australia, Canada, and the U.S.A. will be counted as a separate country.

MESSAGE Will consist of: RST, QSO number, and Zone number.

SWL'S The same scoring rules apply but must be based on stations and message copied.

AWARD A Trophy will be awarded to the top stations in each class. In addition a certificate to all winners.

LOGS AND SCORE SHEETS Use one log per band. Logs must contain: Band, Date, Time in GMT, Call Sign of the station worked, message sent, message received, points and multipliers. A summary score sheet is required with a list of multipliers worked. Comments will also be very much appreciated.

ALL LOGS MUST BE RECEIVED BY JULY 30th TO QUALIFY

SEND LOGS TO: Francesco DI MICHELE, I2DMI--- P.O. Box 55----- 22063 Cantu----- ITALY

REPRINT FROM LAST MONTH, WITH NAMES SUPPLIED BY GIN, JA1ACB

Back Row:

JK1GDD (writes RTTY column for CQ Ham radio Japan)

JG1RVN (very busy on DXpeditions)

JA1DXV (Rep. TEAC Computer Division)

JH1QDB (Pilot, Japan Air Line)

JH1ISF (Editor in Chief, CQ Ham Radio -Japan)

JA1IQV (Rep. antenna manufacturer)

JR1AIB (Well known contester, took RTTY to YI1BGD)

Front Row:

JA1ACB, Gin (Famous DXer and supporter of same)

JA1DSI (High school teacher)

JA1DI (Retired from Canon Camera)

JA1JAN (Honor-Roll SSB/CW - naw on RTTY)

JH1BIH (Junior High School teacher)

22nd Alessandro Volta RTTY DX Contest

OFFICIAL RESULTS

CLASS A2: Single Operator/Single Band

#	Call	Exch.Pts.	QSO	Multipliers 3.5	7	14	21	28	Tot.	SCORE
1)	G4SKA	1710	147			47			47	11814390
2)	OK2FDM	1834	126			50			50	11554200
3)	I2KFW	914	61			31			31	1728374
4)	SP9BCH	535	66			26			26	918060
5)	SP93BGD	391	60			24			24	563040
6)	IK1DFH	268	42			16			16	180096
7)	YO6AOO	280	38			11			11	117040
8)	SP4KM	142	43			12			12	73272
9)	SP3XR	152	23			14			14	48944
10)	I2DJX	130	18			11			11	25740
11)	YU2CB	86	18			10			10	15980
12)	WA8FLF	33	3			3			3	297
1)	OK3CPS	389	22				17		17	145486
2)	G0AZT/W6	316	14				11		11	48664

CLASS A1: Single Operator/All Bands

#	Call	Exch.Pts.	QSO	Multipliers 3.5	7	14	21	28	Tot.	SCORE
1)	I2OLW	4036	221	0	13	39	31	2	85	75816300
2)	I2HEO	2073	130	0	0	39	18	2	59	15899910
3)	G0ARF	1527	141	0	2	30	26	0	58	12487806
4)	PA3DBS	1604	113	2	4	31	22	0	59	10693868
5)	K6WZ/0	931	64	3	5	22	12	0	42	2502528
6)	HB9BGJ	708	71	4	2	25	10	1	42	2111256
7)	HP1AC	1052	47	0	0	18	9	0	27	1334988
8)	G4MKO	308	67	0	0	14	12	0	26	536536
9)	KA1GET	715	39	0	0	12	6	0	18	501930
10)	EA5FKI	524	26	0	0	10	7	1	18	245232
11)	I4IBR	320	35	0	0	18	2	0	20	224000
12)	HP1KZ	487	25	0	0	9	4	0	13	158275
13)	I6KYL	228	31	1	0	9	7	1	18	127224
14)	WB4UBD	340	18	0	0	7	5	0	12	73440
15)	DK5KJ	166	25	0	0	11	5	0	16	66400
16)	HA5KHE	131	30	1	1	14	0	0	16	62880
17)	SM3DXC	114	26	0	0	12	1	0	13	38532
18)	SM7BGE	32	19	0	0	7	2	0	9	5472

CLASS B: Multi-Operator

#	Call	Exch.Pts.	QSO	Multipliers 3.5	7	14	21	28	Tot.	SCORE
1)	G3UUP	2224	163	1	2	38	24	3	68	24650816
2)	LZ2KIM	2699	178	0	0	47	2		49	23540678
3)	HB9CAL	2026	150	2	6	32	26	2	68	20665200
4)	4N7N	1389	140	2	6	25	32	3	68	13223280
5)	YO5KDW	337	42	2	1	12	7	3	25	353850
6)	OK3RJB	232	41	0	0	15	6	0	21	199752

CLASS C: Short Wave Listener

#	Ident.			Multipliers 3.5	7	14	21	28	Tot.	SCORE
1)	NL4483	1343	93	0	2	23	23	0	52	6494748
	F. van Oostenbrugge									
2)	ONL 383	1099	114	0	0	25	23	0	48	6013728
	Yerganian J. Jacques									
3)	G1DPL	636	81	1	3	25	10	0	39	2009124
	Martin Beer									
4)	ONL 6945	312	44	0	0	15	8	0	23	315744
	Marc Domen									
5)	G6LAU	289	38	0	1	15	6	3	25	274550
	David Tanswell									
6)	ONL 4033	178	19	0	0	12	3	0	15	50730
	Egbert Hertsen									
7)	I1-579TO	121	21	0	0	12	3	0	15	38115
	Gianfranco Caobelli									
8)	DE1DGD	47	27	0	0	9	0	0	9	11421
	Dieter Gonschorek									
9)	I1-50156	84	6	0	2	8	0	0	10	5040
	Pasquale Corda									

CREDITS

Control Logs:

OK1AMS YO6CFB SP2FN I2DMI I2UVI

DX Stations in the Contest:

ZP5CDV LU8DHT JY9IU TI2FPL 4X6LB CO2BB CP1IL XE1ACG VK5RY TR8RLA TG9VT 9H4B K3MW VK7LZ TA4A KP1AC SU1FN P2MHD YB1BG OA4ZP VK2AAX FT5ZB

Congratulations to all the Winners !

ARMED FORCES DAY 1989

The annual Armed Forces Day Communication Test is set for **Saturday, 20 May, 1989** and marks the 40th anniversary of this event which emphasizes a continuing climate of mutual assistance and warm esteem between the military and amateur radio communities. The traditional military-to amateur cross band operation and broadcast of the Secretary of Defense message are the featured highlights and include operations in CW, SSB, RTTY and Packet radio.

These tests give both amateur radio operators and short wave listeners (SWL) the opportunity to demonstrate their individual technical skills. Special commemorative acknowledgment (QSL) cards will be awarded to those amateur radio operators achieving a verified two-way radio contact with any of the participating military radio stations.. Interception of these contacts by SWLs are not acknowledged by QSL cards, however, anyone who receives and accurately copies the Armed Forces Day CW and/or RTTY message from the Secretary of Defense can qualify to receive a special commemorative certificate from the Secretary.

CROSS BAND CONTACTS

The military-to-amateur cross band operations will be conducted from **20/1300** UTC (Universal time) to **21/0245** UTC **May 1989**.

MILITARY STATIONS PARTICIPATING IN CROSS BAND OPERATIONS:

AAE
HF/MARS Radio Facility
Fort Houston, TX

AAH
Army HF/MARS Radio Facility
Fort Lewis, WA

AIR
2045th Communications Group Andrews Air Force Base
Washington, DC

NAM
Naval Communications Area Master Station LANT
Norfolk, VA

MAV
HQ Navy-Marine Corps MARS Radio Station
Cheltenham, MD

NPG
Naval Communication Station
Stockton, CA

NPL
Naval Communication Staion
San Diego, CA

NMH
Coast Guard Radio Station
Alexandria, VA

NMN
Coast Guard Communication Station
Portsmouth, VA

NZJ
Marine Corps Air Station
El Toro, CA

WAR
HQ Army MARS Radio Station
Fort Detrick, MD

FREQ (KHZ)	EMISSION	STATION	FREQ (KHZ)	EMISSION	STATION
4001.5	LSB	NPG	13986.5	RTTY	AIR
4010	CW	NPG	13992.5	RTTY/CW	WAR
4015	CW	NMH	13994.5	USB	AAE
4018.5	LSB	WAR	13997.5	CW	AIR
4025	LSB	AIR	14375	USB	NPG
4028.5	LSB	AAE	14385	USB	NPL
4033.5	LSB	AAH	14389.5	USB	NAV
6970	CW	NPG	14400	**	NAM
6988	RTTY/CW	AAH	14403.5	USB	WAR
6995.5	CW	AIR	14408	USB	AIR
6997.5	CW	WAR	14440	RTTY	NMH
7301.5	LSB	NPG	14480	USB	NZJ
7315	LSB	AIR	14488.5	USB	AAH
7346.5	LSB	NMH	14665	RTTY/CW	AAE
7358.5	LSB	AAE	20937.5	USB	NMH
7365	CW	NPG	20975	USB	AAH
7372.5	RTTY	NAV	20992.5	PACKET	AAE
7375	RTTY	NZJ	20994.5	USB	WAR
7382.5	RTTY	NPL	20998.5	CW	NPG
7393	*	NMN	21460	USB	NPG
10259.5	CW	NPG	27820	USB	AAH
13927.5	RTTY	NPG	27992.5	USB	AAE
13975.5	CW	NPG			

* LSB/RTTY/CW ** USB/RTTY/CW

Military stations will transmit on the above-listed frequencies and announce the specific amateur band frequency being monitored.

RECEIVING TEST

The CW and RTTY broadcast will be special Armed Forces Day messages from the Secretary of Defense to any amateur radio operator or SWL desiring to participate. A 10-minute tuning call will precede each transmission. The CW Broadcast will be transmitted at 25 WPM beginning at 21/0300 UTC May 1989. The RTTY broadcast will begin at 21/0345 UTC May 1989 and transmitted 60 WPM using 170 Hz shift. Both CW and RTTY broadcasts will be transmitted from the following stations on the listed frequencies:

TRANSMITTING STATION	FREQUENCY (KHZ)
AAE HF/MARS Radio Facility Fort Sam Houston, TX	4018.5, 6988, 9990
AAH HF/MARS Radio Facility Fort Lewis, WA	4021.5, 7309.5, 13994.5
AIR Andrews Air Force Base Washington, DC	6995.5, 13997.5
NAM Naval Communication Area Master Station LANT Norfolk, VA	4005, 7393, 14400

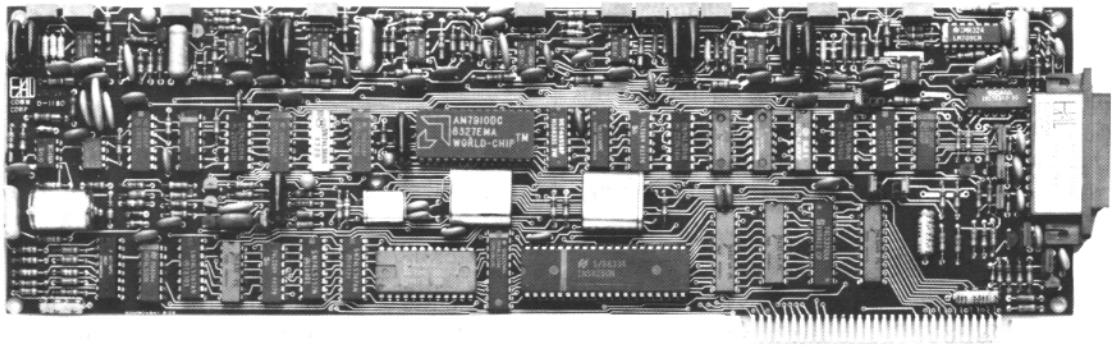
Continued on Page 20

COMPLIMENT YOUR PC . . .

WITH THE BEST!

PCI-2000

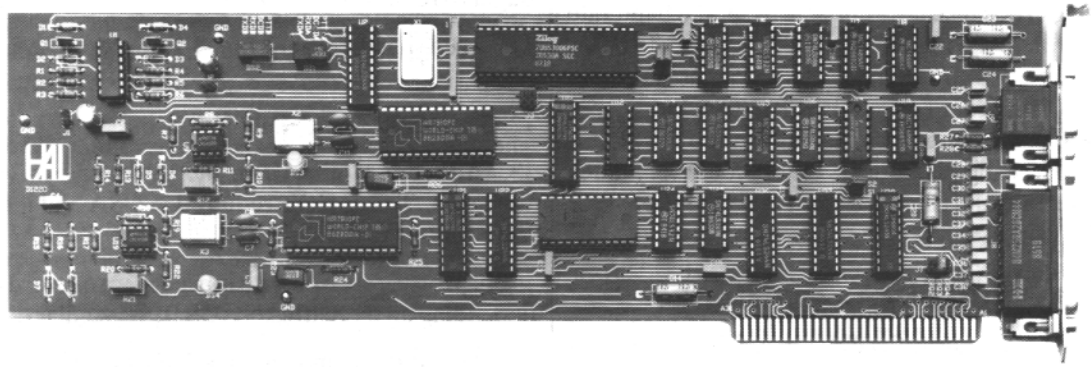
PERSONAL COMPUTER INTERFACE



The PCI-2000 is a high-performance radio communications modem card for the HAL DS-3200 Radio Data Communications Terminal or any fully IBM-compatible computer. The PCI-2000 plugs into the computer just like any full size expansion card and will transmit and receive both RTTY and Morse code. Included on the card is a high-performance RTTY demodulator which includes separate active filters for mark and space, wide dynamic range limiter and detector, and autoprint noise suppression circuits. The PCI-2000 operates at all standard shifts and data rates for ASCII and Baudot and utilizes automatic speed tracking on Morse receive. The software provided offers a high degree of operator flexibility for normal communications as well as for extensive traffic handling operations.

RPC-2000

TWO-CHANNEL RADIO PACKET CONTROLLER



The RPC-2000 is a TWO-CHANNEL radio packet controller that adds fast, error free data communications to radio links. It plugs into an expansion slot of the HAL DS-3200 Radio Data Communications Terminal or any fully IBM-compatible computer.The RPC-2000 uses Packet Radio protocol based on AX.25 to provide data communications at rates from 45 to 4800 Baud.With its built-in modem and RS-232C I/O (for an external HF modem such as the HAL ST-7000 or ST-8000), the RPC-2000 is ready to work on VHF or HF. The software provided is entirely menu driven eliminating the need to memorize complicated commands and procedures.

CALL US FOR MORE INFORMATION AND PRICING ON THE PCI-2000 AND RPC-2000

HAL Communications Corp.
Post Office Box 365
Urbana, Illinois 61801
Phone (217) 367-7373
FAX (217) 367-1701

STEP UP TO THE BEST, STEP UP TO HAL!

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

CONNECTIONS

April brings two important events, my birthday and the Dayton Hamvention. Then there is another milestone this year, my forty years as a H am and active each of those years. Too active, my long suffering XYL would say! Will be looking forward to seeing many of you at Dayton this year.

MAIL

Thanks to Roy KT1N who passed along this bit of information from Jon Severt WB8YJF. Jon says he services the IRL FSK-500 and the FSK 1000 terminal units. He was with IRL from 1978 until it went under in 1984. So if you have an IRL demodulator that needs fixing, contact Jon.

COMMODORE PLUS/4 COMPUTER

Received a note from Frank De Cicco NM2I, 200 Boyden Ave., Maplewood, NJ 07040. Frank uses a C64 and Hamtext software for RTTY. He was given a Commodore PLUS/4 Computer which is not compatible with any of the other Commodores. Frank wrote a program for it, built an interface, and presently has it on the air. He does have a problem with the serial I/O because he is not able to set the baud rate below 50 baud while the majority of RTTY is at 45.45 baud. His question is: "Does anyone know how to adjust the baud rate on a PLUS/4 in order to operate RTTY at 45.45 baud"? Also, are there any programs available for the PLUS/4 for RTTY or any of the digital modes? Frank would very much like to hear from anyone using the Commodore PLUS/4 for amateur radio work.

PK-232 FIRMWARE UPGRADE

AEA is offering their latest firmware upgrade direct from the factory. It is not available from dealers. If you purchased your PK-232 on or after November 30, 1988, your PK-232 may already contain the new firmware, labeled 30-DEC-88. If you have purchased your PK-232 after November 30, 1988, that does not contain the new version, AEA will provide a free upgrade if you send them a copy of the sales slip and $5 shipping and handling. For all others, upgrade cost is $30 plus $5 shipping and handling for $35 total. A manual supplement is also included. Order from Advanced Electronic Applications, P.O. Box C-2160, Lynnwood, WA 98036.

The new upgrade (30-DEC-88) has the following changes:

1. Added the command **WHYNOT**. Sometimes packet data will be received by the PK-232 but not displayed to the screen. Turning **WHYNOT** on causes the PK-232 to generate a message explaining why the data was not displayed.

2. Added the command **CUSTOM**. This command allows some customizing of the PK-232 for PBBS (Public Bulletin Board System) or MARS operation by altering certain default parameters.

3. Turning on **KISS** now sets all packet parameters for TCP/IP operation.

4. Added **AUDELAY** to allow for a delay from PTT to applied AFSK audio. An appropriate setting of **AUDELAY** will help prevent spurious emissions and arcing of amplifier relay contacts.

5. Added the command **DIDDLE**. When in transmit, the PK-232 sends the ltrs character in Baudot and the **NULL** character in ASCII, during idling when **DIDDLE** is on.

6. If the **MYCALL** parameter is left at the default value of PK-232, then no packet transmissions will be allowed.

7. If **DAYTIME** has not been set pressing a will cause an asterisk (*) to be sent.

8. Added the command **NUMS**. This will force the PK-232 into the figures case in AMTOR and Baudot receive.

9. **WRU** is now always on in AMTOR, however in Baudot and ASCII, **WRU** is on/off selectable. The **ABB** default has been changed to none.

10. When in a packet link all left over data will not be transmitted as **UI** frames should a disconnect occur. (This ought to reduce some of the clutter on the packet channels).

11. **MBX** has been enhanced to accept the argument of ALL.

12. The **MPROTO** default is now off.

13. Added a **Morse ID** in the packet mode (required in England). This is NOT required in USA and it is advised to leave this set to zero.

14. In Morse, received data is broken up on word boundaries depending on the setting of **ACRDISP**, similar to word wrap.

15. Added the command **MWEIGHT**. This will allow the user to vary the morse dot to space ratio from the default 1:1.

COCO PROGRAM SOURCE

Irv, WA6LVE, mentions in a letter to Dale that Hams who have the Radio Shack Color Computer, popularly known as a CoCo, might look into the publication "Dynamic CoCo News" by Bill Chapple, W4GQC. Irv says Bill has programs for just about any of the CoCo's ever made including mods. Try the Call Book for Bill's address.

CONNECTIONS Continued on page 17

CONNECTIONS Continued from page 16

MORE MAIL

Just before I turned this in to Dale, a letter from Tom, K5GJ of Amarillo, Texas arrived that really made my day! I laughed so hard I nearly fell off my chair. It was in response to my pet peeve diatribe on the MacIntosh in last month's column. You would have to see it to believe it. All done up in fancy font script with Old English lettering and with fantastic graphics. After mentioning (with great reserve) the claim that "the number of brain dead hams that have resulted from the use of IBM/MS-DOS has been well documented in numerous medical journals", Tom proceeds to write five paragraphs of reasons that "all real hams use Macintosh" Each paragraph is written in symbolics using a specific group of icons. The 5th and last paragraph was the icing on the cake, being written in genuine Egyptian Hieroglyphics. Touche', Tom. I have to admit that the Macintosh graphics capability is outstanding even if your letter was dated April 1st!

NEW PRODUCT

AEA has begun shipping their new AT-300 Antenna Tuner. The AT-300 is the first model in a line of new antenna tuners. The AT-300 Antenna Tuner Features: -Low-pass design to reduce or eliminate TVI -Frequency range coverage of 3.5 MHz to 30 MHz. -Capacity is 300 watts continous power -Dual-needle watt meter gives direct reading of forward power, reflected power, and SWR -Meter range selects 300 watts and 30 watts to ease tuning. -Two, 18-tap inductors give improved tuning accuracy -Front panel controls include impedance adjustment, antenna switching, meter power level switching and meter lamp switching. -Rear panel connections include a coax connector for transmitter input, two coax connectors to antennas, one coax connector to a dummy load, two ceramic feed-thru connectos to balanced feedlines, one ceramic connector seves single-wire antennas and a dc power connector to the meter lamp.

Next month I hope to provide some details on a new Commodore program and the AMSPEC-3 Amateur Radio Spectru Display Receiver by Mauro Engineering. I need to get some additional information first, however.

RANDOM THOUGHTS

This month my muse has failed me. I just can't get cranked up and writing about anything very coherent. Sniffling from spring Hay Fever doesn't help much either (I'll try anything to get some sympathy from Dale and try to wriggle out of taking the blame for being late with the column and worse yet, all these words without saying anything worthwhile).

Just to make some of you folks feel better about your problems with the PK-232, I will confess to a few problems. When I first got the PK-232, I tried to connect it to my ham-shack computer (an IBM compatible Zenith luggable, at 40 pounds you cannot call it portable by any stretch of the imagination). I loaded the computer with PC-PAKRATT and tried to bring things up. I'm not sure why computer types refer to starting a program as "bringing things up". However, I am sure some folks using a computer with the PK-232 associate the phrase with bringing something up from the depths of Hell!, at least to judge by my mail. At any rate, I got the introductory screen to come up that has selections for setting baud rates and the like. I set the baud rate for 1200 baud and then, following the menu, hit the space bar to start communication with the PK-232. After a long, long time (actually less than a minute) I get an error message on the screen saying "unable to establish communications with your PK-232. Please refer to your PC-PAKRATT manual." Rats! Now I check the cable connections (it's the AEA "Y" cable so should not be a problem). Finally get out my trusty RS-232 blinking lights test plug and put it in the line. Gee, I can see the computer sending something to the PK-232, but nothing coming back. Read the book again. Check things again. Battery is out of the PK-232 like the book says it should be. Lets see, that error message said something could be wrong with the baud rate so try turning off the PK-232 and back on again. Try running the PC-PAKRATT program again. Hit space bar to start initialization again. Look at blinking light test plug on RS-232 line - hey! looks like they are talking to each other. Twenty seconds later the Main Menu screen pops up on the display and I select F2 for Packet mode. Hooray, it works! I get the packet display on the computer CRT.

I think what happened was that when I first fired up the program, the PK-232 was in some baud setting other than 1200 baud. Turning off power and then turning it back on caused the default terminal data rate (TBAUD) of 1200 baud to be set, thus allowing two-way communication between the PK-232 and the Computer. That is the problem with these computers, they are so dumb, they will do or try to do exactly what you tell them to do. They just don't have any common sense at all. Something about the "Innate perversity of inanimate objects"?

I suppose that, by now, some of you KAM owners are getting awful tired of reading about PK-232s. So how about one you folks sitting down and writing about some of your experiences, good or bad, with the KAM. Do you like it and if so, why? If not tell us what you don't like about it. Have you used it with computer software? What kind of software/computer and did it work as advertised? Write it up and send it to Dale. He will be overjoyed to receive it.

Gad! Only 10,200 plus characters for the column so far. It reads so badly I am putting myself to sleep. Only hope is that another columnist is more windy than usual and will take up the slack. "Honestly Dale, my mind was a complete blank". Maybe next month will be better. Maybe I will get some more mail from disgruntled Apple MacIntosh owners. Until then, very 73 **de Cole W6OXP**

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

AMTOR

Gosh, another month rolls by. Spring is sprung, the grass is riz, I wonder where the boidies is? (sic English "humour").

Were the bands bad or just BAD, for the BARTG contest? Despite the poor conditions, I managed to "top" my last year's score by 50,000 odd points but the sob story of the month, must surely be mine. My TS-440 takes a five hour involuntary "rest period", just as the VU7JX "peaks" to the west coast on 15 meters. By the time I figure out that the rig is not at fault, more like a hair-line crack in the neutral 12v power line fuse from the Astron PSU, the band dies to VU and my chances of getting my 154th country, disappear completely. So much for the "joys" of RTTY DXing!

Did anyone spot the two deliberate mistakes in my last article? The "post script" got a bit messed up in the English to American translation! I never asked for twenty one (21) IRCs for the VP5 cards, it would be nice, but I would be accused of "selling" QSL cards. VP5/AA5AU cards would be out soon. (Ed: those typos keep creeping in somehow. He really only wants two (2) IRCs)

AMTOR PLEA

A few more pleas for information on how to get started into AMTOR have filtered through to me since last month's article. It appears these requests are from very new subscribers to the Journal, so I will take this opportunity to list some of the past issues that have covered the subject in reasonable depth. New subscribers, I am sure, will appreciate that it is not possible to write the same article content month after month, so if you would like to read and hopefully learn more about THIS HF digital mode, I recommend you become a regular subscriber and also ask for the following back issues. (Commission, Dale??).

April 1988, May/June 1988, July/August 1988, September 1988, October 1988, December 1988, February 1989. (Ed: All of these issues are available from our office - price $1.50 PPD per copy)

For the newcomer to AMTOR who doesn't have an all singing, dancing, bells and whistles, AMTOR compatible rig, do not despair. Most older type rigs with big and chunky PTT relays, can be modified to switch from RX to TX and back again, without too much trouble and the relays, if in good condition, WILL handle the 20ms switching.

I have some proven mods, for the following: TS430S, TS930S, FT101Z/ZD, FT102, FT901DM, IC730, IC751. Drop me an SASE if you need the info. Other sources of rig mods, could be the rig manufacturer or AEA in Washington state. (Ed: See AEA ad elsewhere this issue for address).

The Considerate Operator's Frequency Guide for AMTOR users is: .070 to .080 Khz on 10, 15 and 20 mtrs. I do not use the lower bands due to the lack of a decent antenna, but if the newcomer stays within .070 - .080, at least the Baudot fellas will be most appreciative. Ten kilohertz does not sound like a great deal of bandwidth to play with. It ISN'T.

Thought of the Month!

The theoretical bandwidth of a RTTY (AMTOR, ASCII, Baudot) signal is roughly calculated by: Shift used, plus three (3) times the Baud rate. The most common/popular TNC used today, uses a shift of 200 Hz. So, if my math is correct, 200 plus 300 = 500 Hz (ARQ runs at 100 baud). Therefore 10Khz should support at least eighteen different ARQ QSOs! Oh for a perfect world! If there are two or three stations running high power, too much mic gain or with the processor switched on, then the bandwidth used by the "offenders" will increase dramatically.

Using the above "formula", a Baudot signal at 45 Baud and 200 Hz shift only occupies 335 Hz (we wish!), add a California Kilowatt and a bit too much audio and you will probably still not take up as much bandwidth as a badly "tuned" ARQ signal. Listen around and tell me if I am wrong.QRP AMTOR rules, OK?

AMTOR MAILBOXES (APLINK Protocol)

CALL	SELCAL	OP	LOCATION
AH6D	AAHD	Paul	AIEA (Honolulu), Hawaii 14073.5
G4SCA	GSCA	John	Plymouth, England 14070 (1800-2200 Hz, temporary)
HL9TG	HLTG	Gary	Camp Humphreys, Korea 14073.5
KB1PJ/8	KBPJ	David	Cleveland, Ohio 14070.5
KS5V	KKSV	Ed	San Antonio, Texas 14072.5
PJ2MI	OJMI	Jose	Curacao, Netherlands Antilles 14077.8 (14079.9 AFSK)
TI2ALG	TALG	Alvaro	San Jose, Costa Rica 14074 (temp QRG, may QSY)
VK2AGE	VAGE	Gordon	Lismore (Sydney), NSW, Australia 7045 14075 14077 21076
VK2EHQ	VEHQ	Peter	Sydney, NSW, Australia 14077
WA8DRZ/6	WDRZ	Craig	Palamar Park (San Francisco), California 14072.5 14073.5 14074.5 14075.5
WB7QWG/9	WQWG	Bob	Indianapolis, Indiana 14071.5

PLEASE SEND COMMENTS/CHANGES TO WA8DRZ

Continued on page 20

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

PACKET

FAIR TRADE

I was reading through a MAJOR Ham publication the other day and I noticed something interesting. Many of the ads for Ham equipment did not have the prices listed. As an example, one electronics ad had listed the list price of each piece of equipment advertised and then under the column marked "our price", it said "CALL". What strikes me as being funny is that the majority of the advertisers are doing this. I could speculate as to why they are doing this and a couple of reasons come to mind. One is that they are embarrassed (I must be joking) at the price they are asking for the equipment, or, they are trying to limit pricing competition by not letting the general public and their competitors know the prices that are being charged by them. I personally do not see why I should get on the phone and spend what little free time I have calling these places and getting their prices, which more than likely, will be within a few dollars of another store. That to me is a waste and brings back memories of....."price fixing." So, I do not shop the stores that do not advertise their prices. I guess they are afraid of a little competition up front.

IN THE BEGINNING

There was the ether. And someone saw that it was good and could carry information. It did when you used electromagnetic radiation and Radio was born. Now, what do we do with this. Well, we have Morse, voice, FAX, RTTY, AMTOR, Packet, SSTV and all sorts of other goodies. Let's say that you have decided to get your feet wet in the new one, Packet. "WHERE DO I START?" First things first....how DEEP do I want to get. You can get a TNC (Terminal Node Controller) only or you can get one that performs many functions. Well, if you are like me, then your eyes are bigger than your stomach (translated: "Champagne taste on a Beer budget"), so you opt for a TNC controller only. Now, what do I use to talk to it. Well, you can use a computer or a dumb terminal to do the work. Albeit, using a dumb terminal to do the job will not give you the good stuff like saving files, sending files, and etcetera, but is a CHEAP way to get started. I have seen used dumb terminals at the various swap meets for as low as $15.00. Now if you are going to use a computer for the dirty work, any modem communications program will do the task for you. With that all aside, you finally ***READ*** the instruction manual for the TNC. This device is not one that you can get away with the standard operational adage that if it does not work the first time, read the manual. This is a must because of the details each unit can address and the options that must be set. So, after reading the manual and hooking up the radio and the computer to the TNC, as described in the owner's manual, you fire up the whole system.

If the computer/terminal is talking at the same speed as the TNC, you should see a sign-on line from the TNC when the TNC is turned on. If you do not see anything, there may be a wiring problem or the computer/terminal may not be set up right. If you see a couple of characters or just plain garbage, then there is a speed problem. Some TNC's have built into them an auto-baud routine that allows it to fix the TNC's RS-232 port speed to the speed of the computer/terminal. The manual for the particular TNC will describe how that works (Did you read it???). IT will make life easier rather than trying to reconfigure port speeds on a computer or a terminal. Life is too complicated so anything to make it easier will be greatly appreciated. As supplied, the control options in the TNC should be set in a manner that will allow you to use the TNC right out of the box. One thing you must do is to tell the TNC your callsign. That is done by typing "**MYCALL**" followed by a space and your amateur callsign. That way, the TNC knows your call and gives your TNC an identity of its own. Also, this tells you the computer/terminal are talking to each other.

Now comes the FUN part.

Set your radio to a frequency where there is Packet activity in your area. Best bets are to try 145.010 MHz, 145.030 MHz, 145.050 MHz, 145.070 MHz, and 145.090 MHz. You should hear a coarse buzzing sound now and then. Adjust the audio level on the radio as described in the TNC manual and you should start seeing the decoded packets being displayed as the TNC decodes them. If you are not seeing anything, type in a **CNTL-C** and then the command "**MONITOR ON**". That will tell the TNC to display what is happening on the channel. If that does not work, then there may be a wiring problem between the radio and the TNC. If you are receiving packets just fine, then you are ready to adjust the audio transmit level. Just go to a simplex channel that you can monitor and follow the directions in your manual (see, the manual again comes to the rescue) to put the TNC into calibrate mode and transmit at the same time. While listening to another radio, turn up the level until you hear it getting no louder or go into distortion. If in distortion, turn it down until the distortion is cleared up. Then adjust the level down until you notice that the received audio is dropping in level. That is an ideal level to start at. (I can hear the complaints already from the signal purists because that is not the proper way to adjust the level.....fine, who's fortunate enough to own a signal deviation meter? If so, set the level to 3.5 KHz and share it around. If you don't, the method described above will be satisfactory.) With the level set, exit calibration mode and set the command "**NEWMODE**" to "ON" by typing "**NEWMODE ON**". That way, the TNC will go back into command mode upon disconnect.

Now go to a Packet channel and see if you can see someone who is sending a CQ. If you do, and want to connect to him, type "**C**" which means "connect to" followed by a space and his callsign. If there is a dash and a single digit following his call, include this also. Now hit return. If all goes well, the TNC will key the radio and try to connect to the other station.

Continued on page 20

PACKET Continued from page 19

If the connect is successful, the TNC will tell you have connected to the station and now free to type away. If you are not successful, make sure your station is working properly. The receive and transmit audio should be set as outlined above, the squelch should be set to just silence the receiver and everything else should be up and running. If you can hear yourself putting out packets, try lengthening the **TXDELAY** setting somewhat. There may be a possibility that your radio is a bit slow and chopping off part of the packet. You can tell if chopping off is taking place by listening to your transmitted packet. There should be a steady drone and then the tone should get raspy and then quit. The steady drone should be barely noticeable. Adjust the **TXDELAY** to do that. If that does not cure the problem, the other station may not be hearing you. Try another station and see what happens. If that doesn't work out, then call a friend who can hear you and ask him to try to connect to you or vice versa.

READ, READ, READ!

Once you work out the bugs of your system, if there were any, you are in for many hours of enjoyment. The best thing I can suggest is that you > READ< your manual. It will be the best help for you other than a friend. So, good luck and BRAAAAAAAAP.

ADDENDA

There were several previous issues where the subject of how to get started on Packet is covered. They are all available through the Journal, simply write and ask for a copy of the index (be sure to include an SASE). Then simply pick the issues you want and order them. The price is $1.50 per copy PPD but less if you order more than three.

Also, if you have any questions that I may be able to help with, either mail them to me or send them to N6NKO @ WB6YMH-2. Those are the easiest ways of getting things to me. Have a happy month **de Richard, N6NKO BRAAAAAAAP!**

A STEADY DIET OF BEACON BBS RTTY CAN BE BAD FOR YOU. THE RTTY JOURNAL RECOMMENDS YOU CHANGE YOUR DIET!

AMTOR Continued from page 18

The above listings were drawn from AH6D and are courtesy of WA8DRZ/6. For those of you who like to keep an update of the various systems available, add the above list to the one already published in the September 1988 issue of the Journal.

That's it for this month. Sorry I will miss the RTTY bunch at Dayton this year. 73 Gl and DX **de Eddie, W6/GOAZT**

ARMED FORCES DAY Continued from Page 14

NAV 7372.5, 14389.5
HQ Navy/Marine Corps Radio Station
Cheltenham, MD

NPG 4010, 7365, 13975.5
Naval Communication Station
Stockton, CA

WAR 4028.5, 6997.5, 14403.5
HQ Army MARS Radio Station
Detrick, MD

SUBMISSION OF TEST ENTRIES

Transcriptions of the CQ and/or RTTY receiving tests should be submitted "as received." No attempt should be made to correct possible transmission errors. The time, frequency and call sign of the military station copied as well as the name, call sign and address of the individual submitting the entry must be indicated on the page containing the test message. Entries must be postmarked no later than **27 May 1989** and submitted to the respective military commands as follows:

STATION COPIED	ADDRESS
AIR	Armed Forces Day Test 2045CG/DOJM Andrews AFB Washington, DC 20331-6345
AAE, AAH, WAR	Armed Forces Day Test Commander, USAISC ATTN: AS-OPS-OA Fort Huachuca, AZ 85613-5000
NAM, NAV, NPG	Armed Forces Day Test Naval Communication Unit Washington, DC 20397-5161

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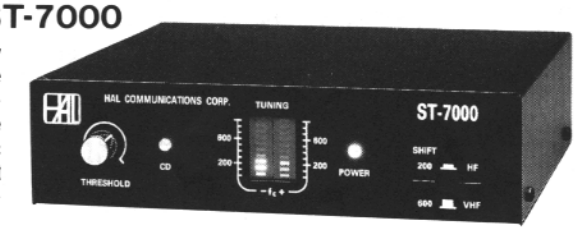
HAL Communications' ST-7000

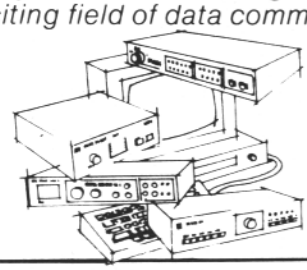
HF-Packet Modem. . .a high performance modem designed specifically for 300 baud HF-Packet. It offers no-compromise performance to assure optimum operation under the most demanding signal conditions. Techniques developed for government and military use are used in the ST-7000. AGC-controlled AM signal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



The PK-232 by AEA

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

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



NO. 1 For the fun (and very affordable) mode, VHF Packet, AEA PK-88 with personal mailbox, 8K programmable memory and TCP-1P compatability.
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NO. 2. . .top of the line! The HAL ST-8000 or HAL ST-6000 and AEA's PK-232 . . .the winning combination. You can't do better for all-mode, all-band enjoyment of hi-speed data communications.

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

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ARRL SOUTHWESTERN
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HAMCON 89

International Goodwill

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Sponsored by the Los Angeles Area
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Exhibit Hours

Friday 5 PM - 7 PM
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Sun. 9 AM - 12 PM
Saturday
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at
9 AM + 2 PM

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Woulf Hong
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Ladies Program

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_____ Sunday Breakfast @ $10.00_____
Make ckeck payable to: Total: $_____
HAMCON, INC., P.O. BOX 18201, ENCINO, CA 91416-8201

EXCHANGE POINTS TABLE

YOUR zone \ 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
2	14	2	15	8	7	16	16	12	16	23	24	30	30	12	14	16	19	20	19	19	25	31	26	30	28	35	35	40	50	50	25	47	14	21	21	28	33	36	37	6
3	10	15	2	8	11	9	13	14	18	21	28	28	30	26	28	27	29	27	21	32	37	39	32	31	24	37	33	40	43	35	11	32	29	35	35	42	48	50	52	20
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