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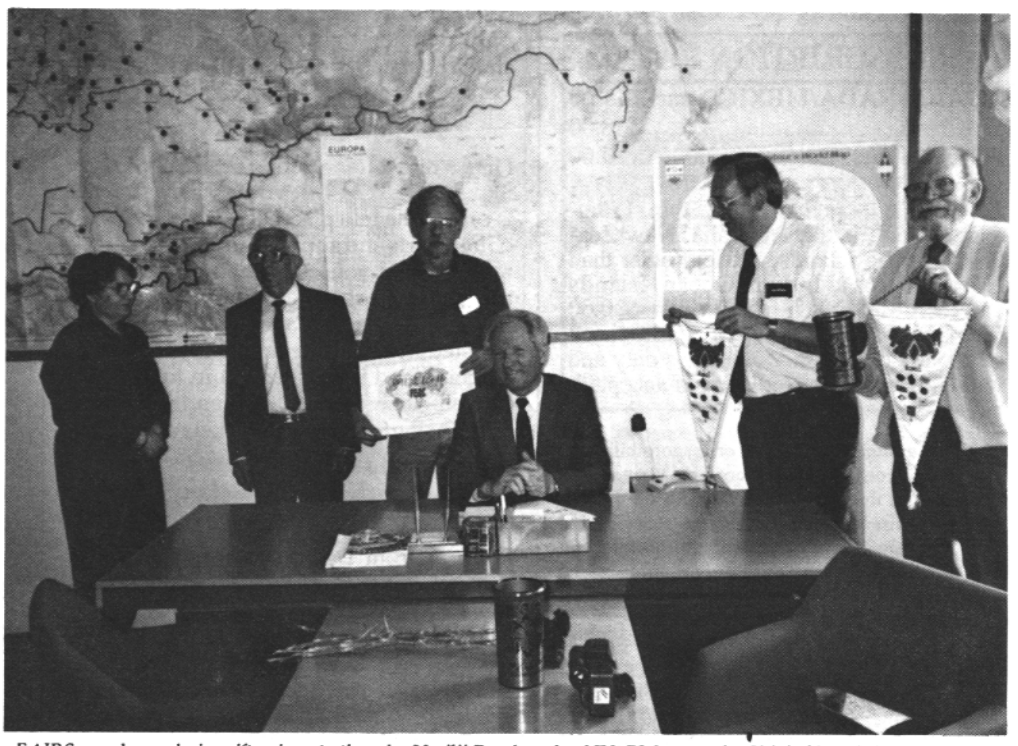
DIGITAL GOES EAST

Story page 20

IN THIS ISSUE



FAIRS members admire gifts given to them by Vasilij Bondarenko, UV3BW, (seated), Chief of Krenkel Central Radio Club, UK3F, (RSF) Moscow. L to R standing: Vera Sveridova (RSF) manager of QSL box 88, Moscow, Mr. Nikolai Kanzanskij (RSF), John Douglas, N0ISL (FAIRS), David Larsen, KK4WW (FAIRS), and Bob Frebertshauser, W6YMR (FAIRS)

RTTY JOURNAL

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HITS & MISSES

Dale Sinner, W6IWO
9085 La Casita Ave.
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Last month I reported on my trip to Newington to attend the Digital Committee meeting and now by the time you read this column I will have attended another one in San Jose, CA. This next meeting is going to be held in conjunction with the ARRL Networking Conference. Upon perusal of the agenda for the Conference, I see where Ray Petit, W7GHM, will be giving his presentation on Clover II. After running a series of articles here in the RTTY Journal, I'm glad to see his method getting further exposure. As for the Digital meeting, I am hoping the ARRL questionnaire will be ready for final approval by the group. I would like to be able to publish this questionnaire in the next issue. It is my firm belief that collectively we can make the right decision on what recommendations should be made to the ARRL Board. I will keep you posted as this program unfolds.

I had a nice letter recently from Lowell Van Slot, W2DLT, of Teleprinter Corp. Lowell is one of the few places left where you can obtain parts and supplies for older teletype machines. If you ever need anything for any of the mechanical machines, his company is the place. Maybe you are even interested in obtaining an older mechanical machine and if so, then get in touch with Lowell. Their address is Teleprinter Corp., 550 Springfiled Ave., Berkeley Heights, NJ., 07922 or phone (908) 464-5310.

I have been wanting to publish some of the pictures from Dayton 1990 but it always seems I run out of space. So while I don't have that much to write about this month, I am inserting the pictures below depicting the initiation of Bill Henry, K9GWT, into the Oh-Wah-Tah Society that occurred at the RTTY dinner. The ceremony was conducted by Bob Foster, WB7QWG, and myself. If you have never seen this ceremony, then you have missed one of the highlights of Dayton. However, I must tell you that the ceremony does not take place each year. Sometimes it goes a couple of years before someone special is selected for indoctrination into the Society. It is mostly for fun but at the same time it is serious because the person selected is recognized as someone who has given unselfishly to our digital phase of the hobby. So congratulations in 1990 go to Bill Henry, K9GWT, for his work in perpetuating our digital modes. (Note: Don't laugh, you could be the next one selected.)

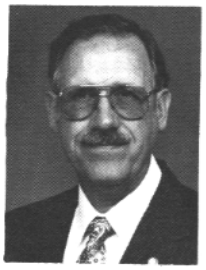
That's it for this month.

73 de **Dale, W6IWO** ■

Bob, WB7QWG, and Dale, W6IWO, host RTTY Dinner at Dayton 1990 Hamvention.

Bill, K9GWT, accepts Oh-Wah-Tah symbol of initiation from Dale, W6IWO, as Bob, WB7QWG, compleetes special ceremony.

MSOs



Dick Uhrmacher, K9VKH
212 48th St.
Rapid City, SD 57702

The National Autostart frequency was established about 14 years ago. MSOs have occupied this frequency (14.085.625) all these years with the first automatic systems. They have always been attended and that means many hours have been dedicated to this type of operation by the SYSOPs. State of the art may be moving ahead but these trusty MSOs are still operating daily. How about saying thanks to your favorite SYSOP the next time you access his MSO?

Hi Gang! Can it be September already? Boy, time flies when you're having fun. Seems like Summer should just be starting, and here it is time to get ready for cold weather again. As I write this months column, (early August), the XYL and I have just returned from two wonderful weeks of vacation up at Hungry Horse, Montana, our personal "little bit of Heaven." MSOs and MSO traffic continue to thrive on the National Autostart Frequency, (14 085 625 Hz Mark frequency, 74 Baud), and it seems almost impossible that we will be starting our 14th year of public service on that frequency. Lots of "water under the bridge," and many fine friendships, QSOs, and traffic have flourished there over the years. For those of you who may be new to MSOs, here's a list of the active systems on the National Autostart Frequency. (For others who may be operating MSOs, HF BBSs, etc., we'd love to hear from you, and would be more than happy to list your system here in this column.)

N1API, K5FL, KA0JRQ and WA8ZRK also maintain other systems, such as packet BBSs, APLINK systems, VHF MSOs, etc. N1API and KA0JRQ are also affiliated with the National Traffic System. If you're new to digital systems, or are thinking about getting into the various digital modes, there's a veritable wealth of knowledge available through the SYSOPs on the National Autostart Frequency, so don't hesitate to get involved.

CALLSIGN	QTH	ACCESS CODE	SYSOP
K0VKH	Rapid City, SD	MSOVKH	Dick
K4KOZ	Boca Raton, FL.	MSOKOZ	Frank
N1API	Meridan, CT	MSOAPI	Al
W6ZRR	San Luis Obispo, CA	MSOZRR	Ernie
K5FL	Denton, TX	MSO5FL	Brownie
KA0JRQ	Glenwood, IA	MSOJRQ	Larry
KB0ATQ	Rapid City, SD	MSOATQ	Jay
WA8ZRK	Dearborn, MI	MSOZRK	Dennis

"THIS IS MY FREQUENCY," REVISITED

Speaking of APLINK, I obtained some first hand knowledge of how some APLINK users feel about sharing "their frequencies," After dropping a couple of notes to a well established APLINK BBS on 40 meters the other morning, the SYSOP broke in to visit with me for a few minutes. Our "live" (at the keyboard), QSO probably took 15 minutes at most, and actually the conversation centered around APLINK operating features, frequency scanning, etc. After conclusion of our QSO and dropping the link, some "gentleman", (and I use the term very loosely), broke in to say that we should QSY off that particular frequency to ragchew or QSO. I think it must have been a bootlegger, as he didn't give his callsign, and any Amateur Radio Operator worth his salt knows that there are no "reserved" frequencies in Amateur Radio. I happen to have a half-APLINK system (no packet port), operating on that frequency, and understand full well how much traffic takes place there on a routine basis. It's not like hundreds of folks are lined up waiting to use the frequency! And secondly, let's not lose track of the fact that Amateur Radio is a hobby, and it's supposed to be fun! Sure, we all take our involvement in traffic handling, MSOs, APLINK BBSs, SSB nets, etc., very seriously, and point to our involvement with pride. But, if we lose track of the fact that the world will not stop turning if we don't pass that traffic with utmost speed, then you probably should take up stamp collecting, butterfly catching, or some less strenuous hobby! Chill out fellas, and make life more enjoyable for yourself, and others around you!

SAD NEWS DEPARTMENT

It is with a great sense of loss and unhappiness that I report the passing of Erna Bascomb, XYL of SYSOP Frank Bascomb, K4KOZ, of Boca Raton, Florida. Erna and Frank have been partners in life for many years, have enjoyed their lives in the Florida Keys, and at their beautiful home in Boca Raton. Erna passed away on June 22, 1991, after a long illness. My XYL and I have had the pleasure of many fine visits with Frank and Erna in Boca Raton, and we'll miss her cheery greetings and graciousness. We all extend our greatest sympathy and condolences to Frank and his family.

MSO/CBMS/APLINK HARDWARE/SOFTWARE AVAILABILITY

Quite frequently I get inquiries from folks who are interested in becoming a MSO/CBMS (computer based mailbox system) or APLINK system operator, and are looking for both hardware and software to operate these systems. There are several sources for equipment and software, both new and used. For example, if you have an IBM compatible computer, then Clark, W9CD, has written a very sophisticated MSO software package that will operate with several different hardware packages (HAL PCI-2000, PCI-3000, AEA CP-1, etc.), and is available without charge. If you think you'd like to try APLINK (a marriage between AMTOR and Packet modes), then Vic Poor has written an exceedingly sophisticated program, available without charge from TAPR in Tucson, AZ, and utilizes the HAL PCI-3000 system, as well as others. And, there are some of the well known HAL MPT-3100 Message Processor Terminals (MSO systems), available used on the market from time-to-time. If your interested in this area, drop me a line, and I'll be glad to steer you in the right direction.

THE HAM SHACK AND FAST AND COLORFUL COMPUTERS

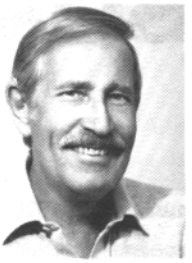
From time to time I have reason to advise Hams about what should, or should not, be used in the Ham Shack when it comes to personal computers. Having a new 33 MHz 486 machine, with a Super VGA monitor in the Shack will sure do great things when it comes to crunching big numbers, and displaying nice graphics. Unfortunately, however, the faster the computer, and the greater the color resolution, the more likely you'll end up with receive interference. High clock speeds and very fast signal switching are just plainly not an attractive thing to have around a high performance receiver. Quite frankly, slower is better in the Shack! If you have an 8088 processor in a good metal case, and a fairly well shielded monochrome monitor, it will cause you far less headaches from RF interference. Proper shielding and grounding is a must, but even that won't prevent high performance computers from messing up your receiver in a lot of cases. And secondly, why do you need blinding speed in the Shack? CW, RTTY, APLINK, Packet, logging programs, satellite tracking programs, etc., all perform completely satisfactorily at 6, 8 or 10 MHz, in a 8088 system. Sure color, EGA or VGA is nice, but if color causes receive interference, is it worth it? When Joe Slick tries to sell you that new machine advertised as being faster than the speed of light, ask him to let you take it home and see what it does to your receiver. It's really a tough nut to crack when a computer birdie ends up on your favorite net frequency, or when that most rarest DX station is calling plaintively for a QSO, and your computer is louder than he is!

That's it for this month Gang! Have fun on RTTY and we'll see you next month.

--73-- de Dick, K0VKH ■

Kuni, JH1QDB, operating 4U1UN, RTTY for sure.

DX NEWS



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

We all wish John good luck with his visit to the hospital. His timely remarks each month are read and enjoyed around the world. His dedication to this column is only exceeded by his devotion to Amateur radio.

Sorry, but this will have to be a very short DX Column. First of all, we have electricity rationing in Guatemala, due to the severe drought, and the power goes off any time the Electric Company pleases and I lose what I have not saved to disk.

Secondly, I am leaving for further medical treatment in Boston on Sunday the 8th of September, and am trying to get ready for the trip. My health has not been the best since my February operation, and I hope, with the Lords help, they can fix it with pills, and don't have to cut a big hole in my head again.

Seems like September will be a very active month, but I may miss most of it. Hope to get back in time to catch some of the rare ones coming up, plus make a small effort in the CQ WW RTTY Contest.

AUGUST HAPPENINGS

August was not a bad month, in spite of the vagrancies of propagation. The "BIG DEAL" of course was the unannounced appearance of COCOS ISLAND, TI9YO, on a short all-RTTY Expedition. That was truly the event of the month, and Minor, TI2YO, is to be heartily congratulated for his effort from this Very Rare One.

But the bands were far from dead, at least at night, and such goodies were observed as: HS0AC, P29BT, 5W1CW, 5W1MK, 9Q5TE, 4K2OIL, ES7FU, RJ1S/UI9GWA, LY1BB, LY2WW, UC1WWD, UO5OT, UF6FJ, UG7GWY, UL7MU, UL7PCZ, CN8NS, VS6EP, FG4FI, TU2BB, 4S7SM, VP8BFH, HH2BZ, 9M2MW, 5V7DP, YN1CB, AP2NK, YI1BGD, 3B9FR, VP5JM, ZK1RY, A35EA, A35IM, 7X2DX, V47RF, ZK1XB, YS1RS, C9RKL (WEWL), HZ1AB, 7Z1IS, SU1ER, 9V1XQ, 3D2MP, ZB2YI, VP2EYF, VP2EXX, FS5UQ, FR4DR, FW1FM, VK0ZA, BV1VB, 3D-A0BW, EL2FK, V51DF, FP4FI, 9H4B, OX3OX, 9K2EC, TY1PS, C6AAA, Z21GZ, EA9MY, A22BW, GD3HDL, VK9NS, OD5ZZ, OD5NG, KG4DD, TI9YO, NP2N, GJ4YMX, HC8VB, and many attractive others, that could keep you busy most of the time.

Many more rare DX is turning up on AMTOR these days and doing a good job of it, in spite of the fact that it is not that easy to monitor AMTOR as it is RTTY, and therefore, more people tend to "step" on them. Nothing like a good Tuning Scope. I just bought a new one from an AD in the RTTY JOURNAL, for $125 and it is doing a very nice job.

ADIOS

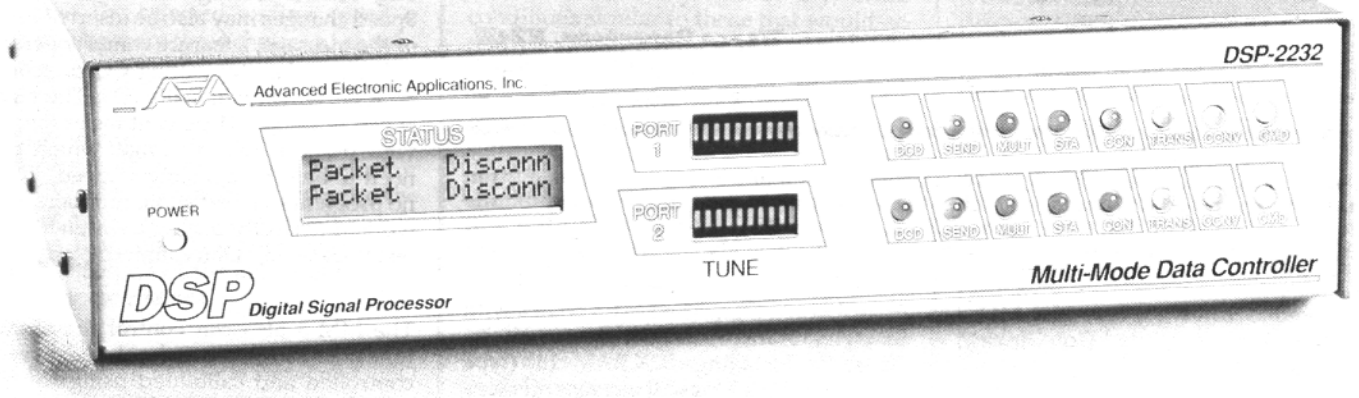
For this month, I will take my leave without my usual editorials about what I don't like about HF Packet and its gradual takeover of the RTTY band. I hope to be with you again, in better shape, next month.

I appreciate all the input received, which made this column and the "DX COMINGS" possible, special thanks to: VK2SG, I5FLN, OD5NG, CE3GDN, W6PQS, and others, who provided me with this input.

So, GOD BLESS YOU and give you HEALTH and the best of DX and hope to see you in October.

de **John, TG9VT**, still on the Guatemala Volcanos ■

AEA is...



Packet...plus!

If you want the best Packet or multi-mode equipment available, look no further. These data controllers have no equal when it comes to features, performance and value.

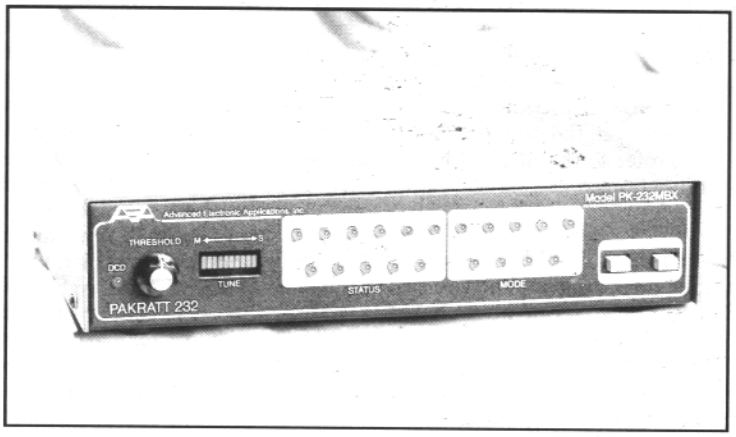
The versatile DSP-2232 (above) is simply the most powerful multi-mode controller available to amateurs. It features Digital Signal Processing modems, dual simultaneous ports, all known amateur digital modes, Packet and AMTOR mailboxes, and much more.

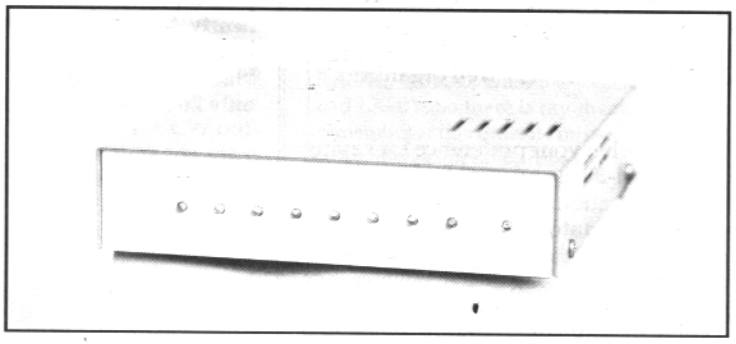
The legendary PK-232MBX (top right) has long been the most popular data controller ever, and is still going strong. Includes: Chebyshev filter design, Host Mode, Signal Identification mode and more. With features like these, no wonder it's number 1.

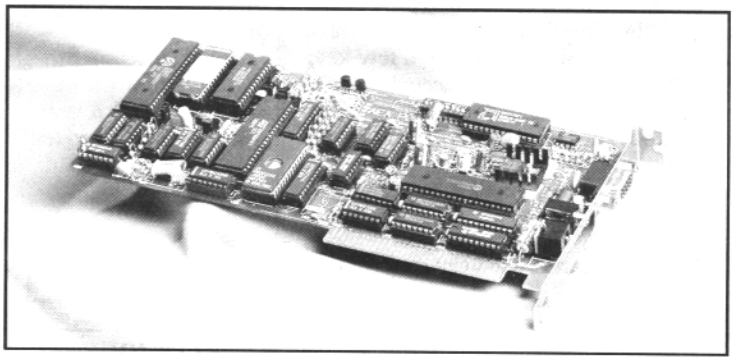
For Packet only, the PK-88 (center) and its PC-compatible plug-in counterpart, the PCB-88 (bottom right) offer AEA's famous Host Mode, Packet maildrop, KISS mode, lithium battery-backed RAM...the list goes on and on.

When hams think of Packet, they think of AEA.

AEA *is* Packet...plus!







For complete information on these or any other AEA products, call the toll-free Info-Line at (800)432-8873.

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CompuServe I.D. 76702,1013

MM-3 Keyer

Wayne Renardson, NZ4W
1113 Woodvale Dr.
Nashville TN 37204

Ed: For this review I asked Wayne, NZ4W, a prominent member of the CFO association (a group of high speed CW operators) if he would like this project. Wayne accepted the challenge and collaborated with Don, K4PUZ, an avid CW contester to put the unit through the rigors of a contest, before writing this review. My thanks to Wayne and Don.

When asked to review the new AEA MM-3 Morse Machine, I consulted Don Binkley, N4ZZ, ex K4PUZ, a local CW operator and, since 1958, a well-known contester. Don has won several International contests over the years and continues to be an active CW contester. Don used the MM-3 for several weeks, putting it through various tests during the evaluation period.

The MM-3 is housed in a 7.4" x 4.75" metal box 1.9" deep weighing 1.4 lbs. There are knobs for speed control and power on/off, and a TT pad for entering commands for the numerous functions. Clearly labeled commands on the top panel reduce the need to refer to the manual for frequently used functions.

The manual is a highly detailed, 68-page booklet, including appendices for the three character sets, serial port character sets, CW abbreviations, abbreviated commands, and schematic diagrams. The manual is well written and necessary considering the many features available on the MM-3. "The user can go through the index to find specific features of interest if he doesn't want to read everything," Don said. "The index is very well organized."

No matter what your preference for keying type, the M-33 is adaptable for several styles of operation. When you power up, it defaults to the automatic mode which uses iambic keying. Other types of operation are semi-automatic or bug mode, which sends dits automatically while the dahs are controlled manually, and a straight key mode where dits and dahs are formed only on the dah paddle. Toggling between the three modes is as simple as pressing a few keys on the TT pad. For those unaccustomed to iambic keying, dit and dah memories can be defeated. The paddles can be configured so a dot/dash squeeze will generate alternating dits and dahs or all dits or all dahs.

"The memory banks are very easy to program," noted Don. The MM-3 comes with 8k bytes Static RAM which can be increased by installing a 32K RAM chip (type 43256 or 62256). This will increase memory from 8400 to 36,500 Morse characters. An installed lithium battery preserves memory when the power is off. The manual claims the battery will last from three to five years.

The memories may be divided into 20 separate locations 0-9 in banks A and B. They can be loaded in any of the above automatic, semi or straight key modes. One memory location can store all 8400 characters. To activate the first location you press *4 to go to Memory Load mode. Press 0 and send your message one word at a time. When finished, press the # key to terminate loading. Press *3 to return to the Keyer mode and press 0 which will immediately send your recorded message. The speed of the message can be pre-programmed or controlled by the front panel knob. If you wish to stop a message to insert your own data, you simply hit the dit paddle to stop it. Pressing D will resume the message at the point of interruption. When the memory is nearly full, the side-tone pitch suddenly lowers and a Memory Load light begins blinking, warning you there is room for only 20 remaining characters.

For contest operators, an automatic incremental number (1 to 9,999) can be inserted anywhere in any of the 20 message memories. The serial number increases by one only after a message is completely sent. Speed changes may also be inserted in part of the message, a feature contest operators will appreciate for calling CQ or sending an RST, which is usually 599. The higher speed is always 41 percent faster than the vital parts of the exchange, which often need to be sent at a slower speed. "It was no problem to insert serial numbers and it worked perfectly during a simulated contest I operated," Don claimed.

The MM-3 also can control the monitor tone (122-2500 Hz) and volume. Speed is controlled and calibrated using the FCC standard word PARIS. The speed control defaults to 5-45 WPM but can be configured using the TT pad. For meteor-scatter users, the maximum speed can be increased up to 255 wpm.

A weight control alters the dot/dash ratio which is variable from the perfect dot/space ratio of 1.0 and the time for a dash/space ratio of 3.0. The dot/space ratio is adjustable from 0.5 to 1.5 in 0.1 increments. Other features include a dash memory which allows the user to press a dot and before it is completely sent, press a dash. When the dot finishes, a proper space is inserted and the dash is automatically sent. A dot memory works the same as above. Pressing **7 on the TT will key the transmitter continuously for tuning up.

For the Novice or experienced operator wishing to upgrade, a Trainer Mode is available. It allows you to set up a practice session by setting a begin and end speed, and the duration of the session in minutes. It uses two methods: (1) Farnsworth method where characters are sent at 18

The model MM-3 Morse Keyer from AEA

wpm with spacing such that the word speed is actually 5 wpm or (2) slow speed, which sends code with the proper intra-character spacing during the speed increase. Both speed and character spacing will gradually increase in proper proportion until the selected ending speed is reached. There are three choices of character sets:

(1) Easy character set: only those Morse characters required to pass a U.S. amateur radio CW test. (2) Medium Difficulty: the easy set plus all other punctuation and prosigns that might be encountered. (3) Complete Set: all of the above plus some foreign Morse characters.

"It is fascinating to hear a simulated QSO between two stations at your own comfort level. You can also call CQ and another station will answer you. It is just like actually operating on the air with no QRM. You actually forget that instead of being on the air you are talking to a box," according to Don.

The ACSII/MORSE converter will also assist CW operators with computers. You can connect your RS-232 serial port to the MM-3 and type characters or control commands from the keyboard. The sent characters will be echoed to the computer screen for checking during practice sessions. The Contest/DX Simulator will also print log entries or QSO text on your printer via the serial output. Any command that can be entered on the TT pad can be entered via the computer keyboard. The computer I/O can be set from 150 to 9600 baud.

In normal operation, the MM-3 converts Morse to ASCII to be sent to your computer. In the ASCII/MORSE mode, sent Morse is still converted to ASCII on the SERIAL OUT line but ASCII on the SERIAL IN line is converted to audible Morse. By reversing the RCA-type phono plugs on the SERIAL IN & SERIAL OUT jacks on the rear of the MM-3, the keyer becomes an inexpensive terminal that can be used as a data entry device from a computer or a master terminal for a radio communications data controller or telephone modem. The ASCII/MORSE converter also allows you to load an ASCII file or plain text script for conversion to Morse. This permits you to use plain English text sent at a constant speed for your practice sessions. Your copy can then be compared to the original text for accuracy. For other digital modes, the MM-3 may be used as a terminal connected to a Packet radio, and is portable enough to be operated from the field.

Contest and DX chasers will find several features of the MM-3 to be useful. Want to operate from Albania? How does ZA2XX sound? The DX Contest Simulator mode allows you to place your station anywhere in the world, at any time of day, under conditions similar to those that would actually occur at the time. You can change bands and expect to hear signals that would occur on a good propagation day from your chosen location. All heard call signs are random, subject to the country's call sign allocation, with more than 300 countries represented. The simulator will award you QSO points and total your score for the contest. You can print your log via the SERIAL OUT port while no QSL cards or postage are necessary. "It is fascinating to sit in my Nashville shack and operate from anywhere in the world," Don, N4ZZ, said. "You can program it for any location and experience the thrill of operating from an exotic location. This is my favorite feature. Next to the DX Simulator, the QSO Simulator runs a close second. It is invaluable for the Novice or the casual CW operator who wishes to upgrade or improve skills. It allows you to participate in simulated QSOs at your own speed and comfort level. The Simulator will call CQ, reply to your call, or talk to you or other stations. If you make an error, it will ask for a repeat. You can request the other station to slow down (QRS) or speed up (QRQ) and it will respond. By connecting your RS-232 to the MM-3, progress can be monitored on your computer screen," Don said.

Other features of the MM-3 include a Beacon mode, which is useful for moon bounce, tropo and meteor scatter communications where it is desirable to transmit a message for a fixed interval and then receive for another fixed interval. The time interval range is from 1 to 999 seconds in one second increments. Touching either keyer paddle will interrupt the beacon. For those using linear amplifiers, there is a 20 msec delay between the activation of the PTT output and the keying of the CW output which allows amplifiers time to switch to transmit before the linear output is keyed. For those using QSK linears, this delay can be set to zero seconds.

There are other features available to users of the MM-3, but when asked his overall impression of the keyer, Don said, "If I were going to buy a keyer, this one, with all the features, would be hard to beat. I don't think there is anything on the market as versatile. You could buy a keyer for less money, but it would not have the DX Simulator or versatility of this one."

de **Wayne, NZ4W** ■

Greetings From ODESSA

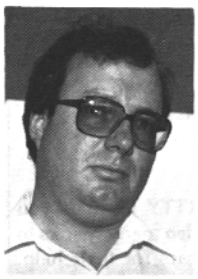
by: Dmitry (Dima) Slyusarenko, UT5RP
POB 300,Odessa,
Ukraine 270000

Many thanks for all the RTTY Journals you have sent me in the past. Also many thanks to all the writers all these years for their help, programs, and moral support. There are so many to thank, but I will try.

Special thanks to: JA1ACB, famous Gin San for PK-232 and TS720A (previous help with FT-980 & TONO 5000E, both lost); TG9VT & KB2VO for Franklin PC8000 IBM/XT computer and lots of programs and attention to my other needs; TG9VT for DiskDrive "Blue Chip" for Commodore; K9MMA for printer (Okidata ML812) and many other useful things; WA8FLF for tape recorder and WordProcessor for Commodore; JH1BIH, Hiro, san for an antenna (HX-330), a 3 element tri-bander; I5FLN, my good friend Luciano for passing the computer to me from John, TG9VT. Also thanks to Luciano for the Packet modem AM7911 and to Fabrizio, IK4GQK. Many things were passed that I needed for the Commodore, chips, etc. To SV1IW, Manos, and Hans, DB1HZ, DK3CU, VE6UX, and many others, who helped with lots of chips and other things for me and my friends. To PA0QRS, Piet, for APlink program; to Hans, DJ1IJ, for lots of floppies; to Doc san, JA3PFZ, (in advance) for promised TS940 or some other radio. He is having some problems obtaining visa from COCOM organization at present. Thanks to N8BA and G3ZCZ for samples of Acuterm and LAN-LINK programs; DK8YA for SUPER-KISS program; to Thomas, DF2KU, for floppies and to many, many others such as: W2FG, N7IIJ, G0CAJ, SV9AKD, SV0CR, I8AA, WA0HAH, XE3ABC, N1BNK, 5B4PW, W0LHS, IK4CUD, G4OJJ, W1DA, DF2ME, WA4WIP, DJ6QT, K2ENT, DK5IZ, W4KA, IK8HEP, W2JGR, PS7KM, GW0ANA, ND6G, KP4BJD, I5ICY, NS7N, OD5NG, VE7ARS, RA3AL, UB4CO, UB5FBX, 4X6UO, DL1RDB, and LX1BY. So there is my thanks to all I can remember at this time. If I missed someone I'm sorry, it was not on purpose.

No other special news from here at this time. Most everything you already know from the newspapers. Life is very hard now and my family does not see a good future. I have some trouble with my ICOM 720A. It will not work on SSB/CW/AM for unknown reasons. So I am hoping for the go ahead on a TS940, just need a sponsor.

I'm QRV these days on RTTY, maybe this operation will help me a little. My health could be better, but I am very glad that all the children and wife are in good health. I wish to all my dear friends, good health/luck and God Bless you and your families. 73 **Dima, UT5RP**



SOFTWARE

Jay Townsend, WS7I
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BBS (509) 534-7924

The software market for Ham radio continues to grow. Where once, we could hardly wait for the next issue of the RTTY Journal for Model 28 mods, now we look forward to reading about new programs to drive our Ham equipment. This month Jay reviews a new program from the UK that is gaining in popularity across the pond.

Well the summer has gone by pretty quickly and thanks to Jim, N2HOS, I had a nice long vacation from the column. Let's get right into the MailBag which has been building up for a while. Ron, W8GUS dropped us a note back in June and was looking for help for his friend. The address is as follows:

BMKMULTY
Grosvenor Software
2 Beacon Close
Seaford, E. Sussex
BN25 2JZ
England

Sorry, Ron that I didn't get this to you any earlier, but perhaps this will help.

Rich, N6GG, a top contester from California, has a lot of very helpful charts and templates that he uses for contesting. If you are having trouble remembering what keys or just want to increase your efficiency, drop Rich a note at his Call book address with an SASE.

Gordon, KI4WV, is very interested in using AMTOR on his present TU and I am sure that he will contact the above software address. Jack, NB0H, one of the Journals new subscribers is inquiring about some good software for the PK232 and the MAC. I think that you might check and see if PK-Gold works on the MAC. Any reader with a suggestion for the MAC and PK232? I see that Jim, N2HOS, sez (see last issue of the Journal) the PCMAC software is the only one available.

OK, from the bottom of the bag comes a letter from Irv from New York. Well Irv, I am sorry to say that I am Apple illiterate! Back in the very early days I tried the first McIntosh and tired of drawing after an hour. About the only way to normally run a modem and a Terminal Unit is with an A & B switch which just switches all the lines from unit 1 to unit 2.

Last letter is from Alex, WB6AFJ and yes, Alex I still need VK0, McQuarie, and looking forward to the trip of VK0SJ and also have sent you the hookup of the ST6000.

By the way, I have a Ham Conference running on my Fido BBS system 509-534-7924 up to 9600 Baud HST, 23 hours a day. If you have questions its far faster electronically. The long summer has been very hard, and I have a pile of gear that's not working very well and needs repairs. The ST6000 is off to HAL as soon as I can find a box. The PK232 is purring along. The Flesher TU470 is the only test Terminal Unit left. Should have a Kantronics unit in for testing soon.

□

BMKMULTY
A SOFTWARE SOLUTION

First of all, I apologize to Mike, G4BMK, (see address above) in advance for failing to write. I have started two or three letters and they just don't get anywhere. There appears to be a rather large demand for his product and this rather late review was not really helpful either. I have received several electronic requests for information, please direct all correspondence to Mike for more information.

INTERFACING CAN BE FUN AND A CHALLENGE

We in the Digital World have been spoiled, I am afraid to say, since the CP-1 and the commodore C-64 and now to the KAM, the PK232, the MFJ1278, the HAL PCI3000 and on and on. The current crop of software that I am receiving runs on any unit. This makes for a couple of problems. First, the author of the software illustrates how to hook up the computer but doesn't supply any of the necessary cables or parts. He/they pre-suppose that a diagram with a TL061 a few diodes and capacitors will be understood by all. Frankly, I had to do some research and some thinking, which was kind of refreshing. We are becoming far over dependent on a system which supplies ready-to-run equipment.

It's been years and years since I have hooked up a RI line which, for those not familiar with RS232 terminology, is the Ring In line. This BMKMULTY while interfacing to any terminal unit is quite complicated and not for the casual operator. The firm does, however, appear to sell tuner and audio interfaces as an accessory and I would suggest getting it/them. However, hooking up to the ST6000 was a snap. Here's the method that I used.

HAL ST6000 HOOKUP

I took the audio out jack from the ST-6000 that has a white wire and a ground; also just used the "RS232 out" jack from the ST-6000 which has two wires, clear and black. I actually made another plug up for the "RS-232 out" of the ST-6000. Then I went to Radio Shack and bought one female RS-232 25 pin connector. Hook the white audio wire to pin 22, the ground to pin 7. Then hook the Black wire from RS-232 to pin 20 and the clear to pin 8 and the ground to pin 7. Since the ST-6000 already is configured to run the PTT lines, it work as well as the FSK that I had to modify a long time ago.

This method should also work on a number of other units, as long as the unit is presently working then really the only big change is in the signals that are going to the computer. The software requires audio to decode and uses 20 and 8 instead of the normal pins 2 and 3. Really not all that difficult, but it did look rather hard at first.

FIRED UP AND RUNNING, SENDS AND RECEIVES FIRST TIME

Wow, this is almost a first when it comes to my interfacing projects. Usually I blow at least the send data and receive data lines. Try interchanging them if it doesn't work! Well now I am ready for some AMTOR DX. Since I sent the PCI-3000 board away I haven't been doing much AMTOR and I

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. . .THE BEST PLACE
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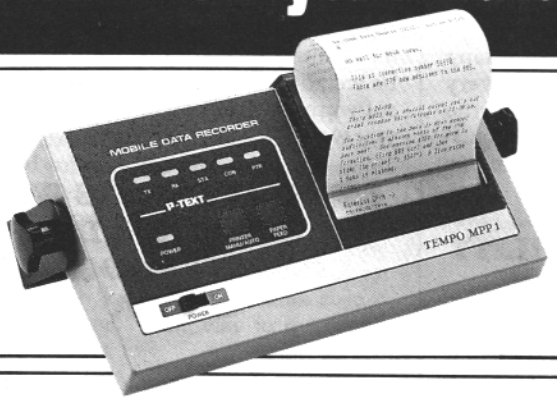
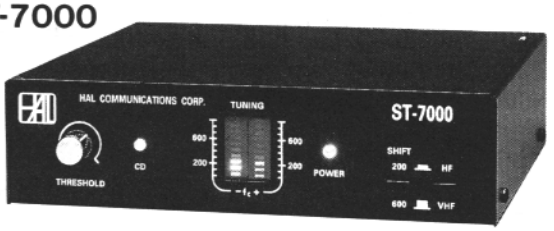


The TEMPO MPP1

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

HAL Communications' ST-7000

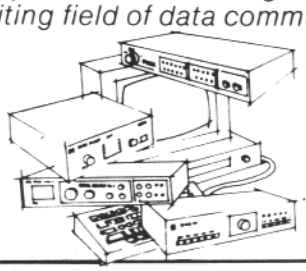
HF-Packet Modem. . .a high performance modem designed specifically for 300 baud HF-Packet. It offers no-compromise performance to assure optimum operation under the most demanding signal conditions. Techniques developed for government and military use are used in the ST-7000. AGC-controlled AM signal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



The PK-232 by AEA

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

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



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

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

If you have any questions concerning these units, or would like to discuss your requirements with a knowledgeable specialist, please call or ask for Fred Daukantas, N6SFD. 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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want to try the suggestions in the new Link Column that I have just finished reading.

BMKMULTY has a great section in the manual on AMTOR timing for those of you who participated in the recent SARTG contest. It should have a better appreciation. It also has a DX and a high reliability mode.

RTTY Mode is turned On

After copying a bunch of signals, I moved to RTTY mode by entering the command RTTY at the command prompt. Amazing after listening to about four of five loud QSOs on AMTOR I tuned up above 14.080 and nothing, the world is really moving to AMTOR. The STA boys were up very high in the RTTY band and I heard one carrier on 14.087.4. OK I am going to have to call CQ then, this always loosens up the woodwork and a couple of guys crawl out! No luck. Well tuning down to 14.083 and a fluttery signal....great over the pole so should be a DX station. He is in QSO with somebody and using a Siemens Type 100 so I will QRX and see if I can get him when he concludes the QSO. Nice receive, taking a couple of hits which come out as underlines which helps a bit in doing some mental decoding of the copy. OK, its ON7BW and then!

ITS NEVER THAT EASY

I knew it. Nothing in the world of software reviews is easy, the BMKMULTY program receives AMTOR great and sends and receives CW, RTTY, and FEC great. But when I went to get the ARQ mode running, the gremlins finally struck! And with Dale the infamous Editor pushing for this review to boot. Well the DTR (Data Terminal Ready) line is feeding the voltage to the ST6000 that should convert to Audio tones if you are using AFSK and straight voltage if FSK. The tones are all messed up. I haven't really figured out why. I use FSK and everything now seems to be upside down, which in the AMTOR world, means nobody talks to you. Rather than spend forever interfacing things, I shifted to AFSK on the HAL ST6000 and all worked fine. As to FSKing, I am a little bit confused, but that is not unusual, after all, I am a software man not a hardware genius.

If any of you out there are using the BMKMULTY with the HAL ST6000 and operating FSK, please let me know how you wired the system up.

FUNCTIONS GREAT AS ADVERTISED

The program works like a champion and I have run into a bunch of fellows who say it's very popular in Japan and Europe. I had no problems at all receiving or sending ARQ or FEC and things seemed very natural to use. The "DX Mode" and the "High Reliability" modes of AMTOR ARQ are very useful and easy to use. The use of proper function keys was rather refreshing with the use of PgUp, PgDn, End very comfortable and easy to pick up the rhythm. BMKMULTY has a lot of buffers/memos that are easy to configure in a file and work quite well.

AUTO ANSWER FACILITY

Memo \S (S for standby) is a special buffer that is the auto answer buffer and I had it going right away. It is pretty slick, although with the present U.S. regulations of unattended operation on HF, not exactly in full compliance if you aren't home. But, I did get it working and it sent out automatic answers as I was typing in part of this article.

TUNING INDICATOR

This worked quite nicely and is kind of fun, but I would suggest that you use a scope for proper tuning of a AMTOR signal. Along with this is another rather interesting feature of the BMKMULTY software, a calibration utility. Accurate timing is very important to the AMTOR signal and a built in calibration feature is included with the software. While I don't even pretend to understand how it works, it lets you set your computer up to very accurate standards. I tried it, and it does work. The author claims a timing error of less than 50 parts per million which is well within the recommended specification for AMTOR.

RECEIVES CW TOO

This interesting little program does it all. I fired it up in CW mode and it copies right along. I didn't care much for the echo of the CW signal, but it does help with the tuning. It leaves the nice little underline whenever the software determines an error. This is true with all the functions of the program and I found it particularly nice in the RTTY mode. Serial number generation is another nice little feature that shows me why the Brits haven't been looking for contest programs for the wonderful BARTG (British Amateur Radio Teletype Group) contest.

BMKMULTY MAY JUST BE YOUR ANSWER

This program may well be the answer to all of your dreams. If you have a couple of old Terminal Units around and would like to use them and enjoy the ever increasing world of AMTOR, then I would recommend that the user of this program spend a lot of time in the interfacing of the equipment. It is in no way as easy as hooking up a KAM or PK232, but if you have the patience to get the hardware working the software is VERY superb and will serve you well.

NEXT MONTH ITS WF1B VS. SCOTCHLG IN THE CONTEST PROGRAM ARENA

I just received another software package which is WF1B's contest RTTY package, that says it supports a PK232/KAM and MFJ1278. I loaded the software and turned on the PK232 and it didn't work. If hardware interfaces are not software selectable then as far as I am concerned the software has a built in problem. Hopefully, Ray, WF1B, will contact me with the "how to" for making his software work. It looks like just the ticket for all with the above units and looks like a CT clone! Not only that it's hard to do a review with software that isn't working....

The World that we live in is changing, every day brings new and wonderful things. I, for one, think that this digital mode has brought all of us a little closer.

73 and look for us on the Long Path to the West Coast. de **Jay, Ws7i** ■

DX FLASH!

UA9TZ, UA3TT, RC2AR, RA3QK, RA3QAK, along with some DL Hams are going to UL7I and UL7K in Kazakh and then to UH8E in Turkoman. All planned for Oct. 15 - Nov. 15. This news came in before recent events in the area, so we are uncertain if they will still take place.

Also please note that QSL requests for UH2E/UA9TZ go to P.O. BOX 29, Gaj, Russia, USSR, 462630. This information supplied by John, N0FAC.

THE LINK

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

Jim continues his tutorial on APlink this month by taking us through the paces of logging on to a system and then taking advantage of all the system provides. You may wish to enlarge some of the commands and have them handy by your radio.

This month, I plan to continue with the tutorial on APLINK that was started with the initial column last month. How many of you have tried APLINK for the first time? Come on, get your feet wet. I use it every day to leave and pick up messages from Ham friends. It sure is more efficient than trying to keep skeds. Seems that I always have something else to do when sked time comes, HI!

AMTOR CHANNEL COMMANDS

The following is a verbatim copy of the AMTOR Channel Commands "help" file that can be downloaded from any APLINK MBO.

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

"H" For help (Sends the HELP file.)

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

"LOGIN (YOUR CALL)" Logs you into the MBO.

"LOGON (YOUR CALL)" Same as LOGIN.

"L" List all available messages in the system, not including bulletins. (See note)

"L (NUMBER)" As above, equal or greater than (number.)

"LTO or LM" List all messages to you.

"LTO (CALL)" List all messages to (CALL.)

"LFM" List all messages from you.

"LFM (CALL)" List all messages from (CALL.)

"LT" List all NTS messages.

"LB" List all GENERAL INTEREST bulletins. (see note)

"LB (NUMBER)" As above, equal or greater than (NUMBER.)

"LR" List AMTOR users who have LOGGED ON in the past 24 hours.

"LP" List all pending traffic (For other MBO stations only.)

"NTS" List all un-forwarded NTS messages.

"RN or RM" Read all NEW messages addressed to you, "R (NUMBER)" Read message (NUMBER), "RM (NUMBER)" Read message (NUMBER) including routing headers.

"SP (CALL)" Send a message to (CALL.) End with NNNN.

"SB (NAME)" Enter a bulletin with (NAME), End with NNNN

"SB (NAME) AT (ROUTE) BID (BID)" - Enter a bulletin with (Name) at (Route) with a BID of (BID.)

"SP (CALL) AT (ROUTE)" Send a message to (CALL) to be forwarded, via (ROUTE) "ST (ZIPCODE) AT (NTS STATE CODE)." Send an NTS message (Use accepted NTS subject and message format.)

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

"CANCEL (NUMBER)" Cancels message (Number), if orginated by you.

"T" Talk to the SYSOP.

"I" Iinformation about this system.

"V" Read Version number.

"A" (After seizing the Link), abort a file being received.

"LOGOUT" Logs you OFF.

"LOGOFF" Same as LOGOUT.

"///" Anywhere on the line cancels the line (except in messages.)

NOTE: The L, AND LB commands will only list messages you have not previously listed. Follow the command with a number to over-ride this feature. Use "0" to list all messages in the category.

HERE ARE SOME SPECIAL COMMANDS FOR THE EXPERT USER:

"EXPERT" Toggles the "EXPERT" mode

"RI" Reads the MBOs intercept file

"RF" Reads the MBOs AMTOR auto-forward routing file. NOTE: "RI" and "RF" are available to other MBOs only

"F" (After seizing the link), aborts a file being received and marks it "Forwarded", if it is for you. (This is for use with dupliate messages.)

Now for some comments on the AMTOR CHANNEL COMMANDS. Remember that AMTOR is not an error free mode. If you enter a valid command, but the MBO does not receive it correctly, it will not respond to the command. If you entered

the incorrectly received command with the +? sequence, the MBO will respond ?? +?. This means that the MBO did not understand the command. If, on the other hand you entered the command with a (CR/LF), the MBO simply ignores that line and does not change the direction of the link. That is, you will still be the INS (Information Sending Station). Always begin a command on a new line. If the link is bad, a blank line before the command line will clear the receive buffer of any garbage characters.

A common problem, again with weak links or when the user gets a little anxious, is that a command is sent to the MBO before it has been able to respond to a previous command. APLINK remembers the commands, but responds to them in the order they were received. So when the user enters a command but the MBO is responding to a different command, confusion results. When this happens, simply enter the +? sequence when the MBO turns it back to you and it will process the next command. If there are no more commands to process, the MBO will respond ?? +?.

The CNCN command is very powerful. It essentially resets the command processor in APLINK and gets you back to square one. It has yet another valuable use. Sometimes an APLINK SYSOP will inadvertently leave his system in the KEYBOARD mode rather than the MBO mode so that when you connect there is no MBO response. At that point, you can remotely change the APLINK system to the MBO mode by entering the command CNCN+?.

LISTING MESSAGES

The list command takes the form shown in Figure 1. For messages, the form of the response to the command issued by KF5BL is as shown in Table 1. Notice that the messages are listed in the order most recent first and oldest last. Also, observe that while all NTS traffic is listed, only private messages to KF5BL are listed.

The following is a verbatim copy of the APLINK HELP FILE (A message list explanation). You will notice that the format for the message list is similar to that of commonly used PACKET BBS programs. The symbols for type and status are also consistent with the PACKET system.

MSG	TS	SIZE	TO	AT	FROM	FILED(Z)	SUBJECT
324	TN	301	84078	NTSUT	KE5HE	0105/0445	VERNAL
323	TY	278	77859	NTSTX	N5TC	0105/0400	HEARNE
322	PN	400	KF5BL		KE5HE	0105/0300	MON MORN
321	PY	375	KF5BL	N0IA..	W9WRU	0105/0245	REQUEST

Table 1

"MSG" = Message number (assigned by the system)

"T" = Message type as follows:

"P" = A private message, may only be read by the addressee, orginator or SYSOP

"B" = A bulletin

"T" = An NTS message

"S" = STATUS, as follows:

"N" - Message not yet accessed by, delivered, or forwarded to the ADDRESSEE

"+" - Same as "N" except over 24 hours old

"++" - Same as 'N' except over 48 hours old

"Y" - Message forwarded to the ADDRESSEE or another MBO/BBS

TO = Call of ADDRESSEE

AT = Call of ADDRESSEE'S BBS (if followed by a period when "HIERARCHICAL" routing is used

FROM = Call of orginator

FILED = Date/Time message was entered into the system

SUBJECT = The subject line of the message

Figure 1

Message explanation

Message number 324 is NTS traffic originated by KE5HE that has not been forwarded or accepted by anyone. Its size is 301 and it is addressed to zipcode 84078 in Utah and was filed on JAN 5 at 0445 GMT. The subject line has the addressees city, Vernal.

Message number 323 is also NTS traffic, but has been forwarded or accepted by a user as indicated by the "Y" in the status column.

Message number 322 is a private message for KF5BL that has not been read by KF5BL. Notice that the "AT" field of the message is blank. A message with a blank "AT" field will not be forwarded to another MBO.

Message number 321 is also a private message for KF5BL, but it has been either read by KF5BL or forwarded to N0IA on AMTOR since it has a "Y" in the status field. It is possible that N0IA conducted a forwarding session with KE5HE which caused number 321 to be forwarded. The .. after N0IA on message 321 indicates that the hierarchical address of N0IA was used. To insure proper forwarding of any message, always use hierarchical addressing in the "AT" field of a message. That is, send the message with the following command form:

SP KF5BL@N0IA.#SONEV.NV.USA.NA

Do not short cut the hierarchical address as the entire address is needed at some MBOs.

READING A MESSAGE

A user may read his/her messages by using the read commands. The following is a copy of the APLINK file: Receiving Your Messages on AMTOR.

The quickest and simplest way to receive

your messages is to give the "RN" (meaning (READ NEW) command, as soon as you SIGN ON.

All messages in the system not already marked "FORWARDED" will be transmitted to you automatically without further action on your part. As each message is completely forwarded to you, it is marked "FORWARDED" and will not be transmitted again with this command. (You may read it again only with the "R (NUMBER)" command.)

If you are receiving an un-forwarded message and the link is lost it will still be available to the "RN" command.

If you have logged into the system with your automatic answer-back, then the system will mark your messages "FORWARDED" only after it triggers your answer-back at the end of each message.

You do not have to (in fact, cannot) delete a message. Once it is forwarded the system will delete it 24 or more hours later. In the meantime it may be read again using the"R (NUMBER)" command.

Use the "list" commands to see what messages are available.

It looks that I have filled out my space for this month. I hope you find this column helpful. I certainly welcome comments and suggestions. Next month, I will concentrate on entering messages into an APLINK MBO.

73 FOR NOW, GOD BLESS

de **Jim, KE5HE** ■

PACKET

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

Packet Bulletin Boards dominate Richards column this month with emphasis on using the commands for logging in and getting aquainted with a system.

I had just received a letter from AEA announcing the availability of an upgrade to their PK232 Data Controller. The bulletin makes known several upgrades to the PK232 firmware and to their PC-Pakratt program. The upgrade includes an AMTOR maildrop (about time . . .), that is similar in operation to the packet maildrop. There is also a modification to the SIAM routine. The new SAMPLE command can be used for snooping into the mysterious world of HF coded data by displaying the received data for analysis. Also, the new command XBAUD allows for non-standard RTTY baud rates.

I know that my own unit is far from being virgin (me . . . have virgin equipment . . . naw!) and that it does not have the daughter board in it to allow for the enhanced firmware. I think that it is time for me to upgrade the unit and find out what is going on with the new release.

AEA has several different phone numbers for you to use to get information. They have a hot line specifically for dealing with the upgrade. That number is 206-774-1722. Tech support and sales is 206-775-7373. They also have a toll free info line and that number is 800-432-8873.

GOOD PUBLICATION

I received in the mail a copy of a well printed, and bound(!) newsletter from a users group in the Northeast United States. The newsletter belongs to the NorthEast Digital Association. I have had a chance to read the newsletter several times since receiving it. The newsletter is spiral bound and professionally published. Among the contents of the newsletter are maps of the packet backbones and end users ports in their general membership area. There were also articles in the newsletter that were timely and contained good information. If you live in the northeast United States, I suggest that you join the organization and see what else they have to offer.

PBBS COMMANDS

I know there has been a clamor out there for information on how to use a Packet BBS. Well, I will cover the basics here. What I will give will be a generalized overview. This is being done because there are several different PBBS programs available and they all have slight differences.

I will lightly cover the login routines first. Each PBBS (Packet Bulletin Boards) program that is used has a slightly different routine for the first time users. The PBBS will walk you through the routine by prompting you on what the requirements are. After the requirements are met, you will then get the prompt line.

The prompt line is where the majority of the commands are re-quested. Some programs allow you to exit the BBS routines and enter routines that deal with files and transferring them from the PBBS system to you or vice versa. For now, lets deal with just the BBS part of the system since that is the most used part of a PBBS. Once you become more familiar with using the PBBS, then you can experiment with file transfers.

The BBS prompt usually will consist of a string of letters. There may be a few letters displayed or, in some cases, all twenty six letters of the alphabet are displayed with some symbols. That amount of commands being displayed ambiguously can rattle almost anyone. So, do not let it get you unnerved. There is a simple way for you to unravel that maze of commands. The BBS will have built into the software a command that will help you out of the mess. It can be accessed by typing 'help' or '?'. That command may just bring up a little information on the screen for you on how to use the help function. Within the information, there should be instructions on how to print out the help information. Before sending the command to dump the help file, make sure that either your printer is turned on and the software that you use to talk to the TNC is set to send what is received to the printer or is set up to send the received information to a disk file for printing at a later time. Once that is set up, send the command. It will take a while to get all of the information to your station as some PBBS have detailed help files. Save this information for future use.

On some PBBS systems, there is an abbreviated help system available for use. It is simply accessed by typing a question mark and a space and then the first character of

the function name that you need information on. As an example, if I wanted help on how to send a bulletin message, I would type in '? S' at the prompt. That would give me the abbreviated help file for the send command.

There are a couple of commands that you will be using from the start. They are the Read, Send, and List commands. List could be implemented using a different word but the idea will still be the same.

The Read command has usually several options available. Depending on the PBBS, you can read just your own mail, bulletins, messages since last log on, messages received by the PBBS after a certain date, or certain bulletin types. This allows you to read just what you want to.

The Send command has several option. You can send messages privately, so that only the receiver can read it. You can send out messages as bulletins to various areas (still need to get rid of ALLUS.) Another option allows you to define what kind of message it is. This comes into play especially when dealing with NTS traffic.

The List command will list all messages of all types or one type, messages just to you, or to a specific group. This command allows you to see the complete message base except for the messages addressed as private. They will not appear (usually) unless the person with the callsigns involved, either sender or receiver, logs on. There are so many people out there sending out bulletins of every type that this command can save you time when browsing the message base.

That will help you out in talking to the PBBS. Remember, get a copy of the help file. It will be a great asset to you in the future.

RS-232

Just about all TNCs that are on the market are external units. They do not directly plug into the computer as a card. Somehow the information has to leave the computer and end up in the TNC and vice versa. That is where RS-232 comes into play. RS-232 is the format that is used to send data between the computer or terminal and the TNC.

It works the same way the old teletypes work, using Mark and Space signals. The Mark signal is represented by a positive voltage and the space signal is represented by a negative signal. These signals are carried across several wires that represent data or control signals.

Where this really get confusing is the concept of DTE and DCE. Suffice to say that a computer is a DCE and the TNC is a DTE. The origin of the terms comes from the purpose of the machine and controls what device sends what signals. DCE stands for Data Communications Electronics and DTE stands for Data Terminal Electronics. The DCE unit sends data on the TXD (tranmit) line and the DTE sends data on the RXD (receive) line.

Now I will save you the confusion involved here. If the TNC and computer have both DB-25 connectors, life is simple if you make your own cable. All you really need to communicate is to hook up pins two, three, and seven on the plug that fits onto the TNC to the same pins on the plug that fits on the computer port. The procedure is the same if they both have DB-9 sockets except the pins involved are two, three, and five.

If you have a mixed size problem to deal with, such as a DB-9 on the computer and a DB-25 on the TNC, wiring is a little different. On the DB-25, use pins two, three, and seven. The wires then are attached to, respectively, pins three, two, and five on the DB-9.

Now that I have explained all of the nonsense, here is how you save some money and trouble. Just go down to the local computer store and buy what you need. I would rather use a molded cable than one that I have soldered up. The reason is that the solder connections have the ability to break under continuous flexing. This can drive you bats finding what is wrong. It has bitten me several times. So, I avoid the problem. Another advantage to buying a premade cable is that the aggregate cost will be usually equal or lower. The choice is up to you. And if you still have problems, there is always the one item that never gets read, the manual.

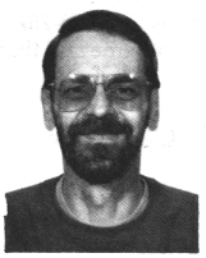
ONWARD AND UPWARD

This month we covered the basic use of a PBBS and the cabling issue between the TNC and computer. Next month, we will get into interfacing the TNC to the radio.

The hobby of amateur radio is getting quite specific in its niche operation. From that result, we have lingo that is used to describe a procedure or a device. I will cover that next time.

Also, keep your eyes peeled for something interesting from me in the next few months. It will be something out of the ordinary for this columnist. 73 de **Rich, N6NKO** ■

AMTOR



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

Are you a Master or a Slave? Eddie takes the mystery out of this phase of AMTOR and then discusses ISS and IRS. Following his instructions should get you on AMTOR easily. GL

Gosh, another month rolls by and time to think of something interesting to write about. I was hoping to have a list of short instructions, for most of the software/TNC packages available on the market today, to assist the newcomers to AMTOR in getting on the air, without reading the reams of pages in their manuals. Maybe next issue? I'm told that at least one software manual goes to over 150 pages! I am glad that I have a simple system with a fairly dumb Commodore 64.

MAILBOX

Many thanks to those of you who have taken the time to write to me for various reasons. Once again, I must apologize for some delay in replying. With the co-sponsored RTTY Journal/CQ contest not too far away, plans have had to be made for the trip, AA5AU, Don and I will be making to V2 and VP2M. Chasing new ones on steam RTTY in between getting my hands dirty

earning some money for our trip, all takes up most of my available time. Hi.

SOAPBOX

The word "acronyms" has reared its head again. I consulted my trusty pre-war Webster's Dictionary but alas and alack, just like "heirarchial and its variations," no explanation was found. Maybe I ought to buy an Oxford English Dictionary. Apparently acronyms is another word for explanations of abbreviations which we as columnists, use to save the editor and his lovely secretary (wife), time in re-writing and editing our monthly ramblings.

To satisfy your request for more explanations of abbreviations in this column, I will endeavor to make a list at least three times a year.

Baudot and FEC beacons seem to be coming out of the woodwork again! Sysops, if you really MUST have a beaconing station (although I cannot think of a good reason for one), please do every one a favor and indicate in your message, that your system is automatic and unattended. Let's face it, not many people enjoy trying to work a DX station in ARQ, only to find out that the system is automatic and that the sysop is tucked up in bed. Incidentally, I thought that "broadcasting" in Amateur Radio was forbidden.

ARQ AND QRO

I received an interesting note from a New Hampshire gentleman, telling me about an ARQ QSO with a very well know European DXer. They each passed their working conditions, etc, and it turned out that the DX was running 1KW! Paul asked, "why so much power?", as if he was only using a vertical and 40 watts. The DX reduced power in gradual steps and finished up using 1 (one) watt with perfect copy both ways. Minimum power to maintain a good contact?

MASTER v SLAVE.. ISS v IRS

There still appears to be some confusion regarding the terms: MASTER, SLAVE, ISS (Information Sending Stations) and IRS (Information Receiving Station.)

The MASTER is the station which started the ARQ link. For instance, if you see an FEC (mode-B) CQ and you want to have a QSO in ARQ (mode-A), you would call up his SELCAL and when a link is established, you become the MASTER. The station being called, becomes the SLAVE.

The MASTER will set the timing standards for the link and in the event of a link failure, the MASTER will attempt to re-establish contact by re-sending the SLAVE's SELCAL, automatically.

Noteworthy tip #1. If you are the MASTER and you notice that the link has "hung-up," i.e. no traffic, try re-sending the SLAVES SELCAL while you are both still "chirping." It works most times with my MBATOR software, however I am not sure if the more "sophisticated" gear will permit such a maneuver.

Tip #2. If you have a rig that is a bit slow on RX/TX/RRX and you do not have any modifications available to rectify that situation, you may be able to get away with being the SLAVE all the time, i.e., you call in FEC and let the other guy do all the work of setting the timing parameters and re-calling in ARQ. However, without suitable mode. You may have difficulty in accessing the many Mailboxes, because you have to be MASTER to do that.

Okay, now on to ISS and IRS. (forget about the Inland Revenue Service!). As I mentioned before, the ISS is the Information Sending Station. He's the one actually sending text or traffic to you, while you just sit back in your padded armchair, sipping a cold one, laughing at his typing and or spelling mistakes. YOU are the IRS (Information Receiving Station.) Now, when the other guy gets sore fingers or runs out of things to say, he will issue the "over" command (+?). Look out, the roles become reversed, you now become the ISS so you will have to type furiously and hope that your spelling is better than his. Naturally, he now becomes the IRS and can sit back with ease and watch your traffic.

To summarize, in an ARQ link, the MASTER/SLAVE designations do not change, UNLESS the original MASTER "times-out". In that case, the SLAVE should wait a minute or two, to allow the MASTER to figure out what went wrong and attempt a re-link. If the SLAVE gets tired of waiting, he could either try to become MASTER or better still, call his party in FEC to find out what's cooking. If you both try to become MASTERS, it ain't gonna work!

On the other hand, the ISS and IRS reverse their roles as soon as the +? control is sent by the current ISS. The IRS can become the ISS at anytime he wishes, simply by "forcing an over." However, unless you really know the other station from previous QSOs or you have something of extreme importance to convey, like your tower just fell down (heaven forbid), or the dog is going to get your dinner, I do not recommend a "forced over." After all, isn't it bad manners to interrupt someone while he/she is talking?

If you must "break-in," send four or five CR/LFs and something like:

((((((Sorry mate, have to QRT)))) +?

The (((act as an attention getter, just in case the other station did not hear the change of tone when you seized the link.

Swamp Rat and Limey

As you no doubt know, AA5AU, Don, and I will be on V2 and VP2M soon. We will not have computer logging, so please send a separate card and envelope for each country worked. It sure will help us and ensure a rapid turn round of your card. Thanks. 73, Good luck and DX

de **Eddie, W6/GOAZT** ■

Edward Trego, W9WKC, passed away June 16, 1991. Ed was a long time RTTY enthusiast, having started his RTTY hamming with Model 12s, graduating to 15s, 19s, 28s and 32s. Ed's TUs ranged from Home-brew to "twin-City TU", W2JTP TU, TTL, TTL-II, Electro-Comm, ST-6 and ST-6000. When video RTTY came along, Ed was again a leader with Serial Number 101 of virually every HAL video terminal made. Ed was also one of the first Hams to try AMTOR when it became legal and was an active AMTOR operator unitl last fall.

Other activities included: President of Trego Farms, Inc. Hopeston, IL., life member of Sports Car Club of America, member of Racquet Club of Chicago, Sailfish Club of Palm Beach, FL., a Danville Elks member, member veterans of Foreign Wars and American Legion Posts, Hubbard Trail Country Club and the Historcial Society. He enjoyed automobiles, photography, and Amateur radio. Ed was also a second lieutenant in the U.S. Navy during World War II.

Ed was a familiar face at all the RTTY get-to-gethers at Dayton each year and a loyal supporter of the Hamvention.

CQ/RTTY JOURNAL WW RTTY "all time" Contest Records

Ed: ***Thanks to Jay Townsend, WS7I, for submitting this compilation of All Time Contest Winners of this premier contest.***

Single Operator/Single Band

AFRICA

Yr.	Mhz	Entry	Score	QSO	Pts	Z	C	W
	3.5	none						
1990	7.0	EA8AKQ	12	2	6	1	1	0
1988	14	EA8RA	104,451	315	941	25	46	40
1990	21	EA9JV	171,360	412	1,224	27	69	44
1990	28	9L1US	93,627	303	909	17	42	44

ASIA

	3.5	none						
1987	7.0	JA3EAT	1,911	35		8	8	5
1987	14	4X6MH	96,726	351		22	53	1
1989	21	JA3EOP	49,541	162	463	27	48	32
1990	28	JR1IJV	123,066	328	954	28	59	42

EUROPE

1988	3.5	HB9DCQ	6,120	90	180	6	26	2
1989	7.0	HB9DCQ	48,865	224	515	19	49	23
1989	14	YU2W	246,272	598	1,664	30	64	54
1990	21	HB9DCQ	189,758	442	1,201	31	79	48
1990	28	4U1ITU	236,842	547	1,499	32	79	47

NORTH AMERICA

1990	3.5	WA8TXT	3,108	73	84	3	3	31
1990	7.0	NT3B	7,303	88	109	28	10	29
1990	14	ZF1RY	209,625	673	1,625	21	59	49
		Op. G0AZT						
1989	21	KE0KB	138,205	468	1,055	26	65	40
1990	28	AB8K	96,250	312	770	29	67	29

OCEANIA

	3.5	none						
	7.0	none						
1990	14	VK3EBP	62,964	198	583	24	48	36
1990	21	YC1YMN	116,051	344	1,027	25	50	38
1989	28	KX6OI	49,572	206	612	18	37	26

SOUTH AMERICA

	3.5	none						
1987	7.0	HK4LII	120	5		4	4	2
1990	14	4M5RY	238,650	536	1,591	28	74	48
1990	21	CE6EZ	201,312	469	1.398	28	66	50
1990	28	HC5J	207,411	495	1,471	27	69	45
		Op. WS7I						

WORLD RECORDS

1988	3.5	HB9DCQ	6,120	90	180	6	26	2
1989	7.0	HB8DCQ	48,865	224	515	19	49	23
1989	14	YU2W	246,272	598	1,664	30	64	54
1990	21	CE6EZ	236,842	547	1,499	32	79	47

Single Operator/All Band Assisted

	AF	none						
	AS	none						
1990	EU	SM0DJZ	153,012	243	622	70	129	47
1990	NA	WA7EGA	669,693	932	1,767	70	151	158
	OC	none						
	SA	none						

WORLD RECORD

1990		WA7EGA	669,693	932	1,767	70	151	158

Single Operator/All Band

1990	AF	TR8JLD	644,333	774	2,293	57	117	107
1990	AS	JH1QDB/JD1	544,101	683	1,857	68	127	98
1990	EU	TQ6JD	1,157,308	1,030	2,809	79	181	152
		Op. DJ6QT						
1990	NA	TG9VT	1,142,946	1.090	2,702	91	182	150
1990	OC	KG6DX	591,839	633	1,867	80	134	103
1990	SA	HC5J	1,364,972	1,143	3,362	89	185	132
		Op. WS7I						

WORLD RECORD

1990		HC5J	1,364,972	1.143	3,362	89	185	132
		Op. WS7I						

Multi-Operator/Single Xmtr.

1988	AF	EA6MR	284,919	485	1,301	47	88	84
1990	AS	RH7E	1,778,448	1,321	3,792	103	238	128
1989	EU	UQ0GZW	1,726,108	1,461	3,802	93	211	150
1988	NA	TG9VT	1,069,362	1,047	2,583	87	178	149
1989	OC	VK2RT	126,629	309	911	43	66	30
1989	SA	HD8EX	2,290,860	1,697	4,895	89	212	167

WORLD RECORD

1989		HD8EX	2,290,860	1,697	4,895	89	212	167

Multi-Operator/Multi Xmtr

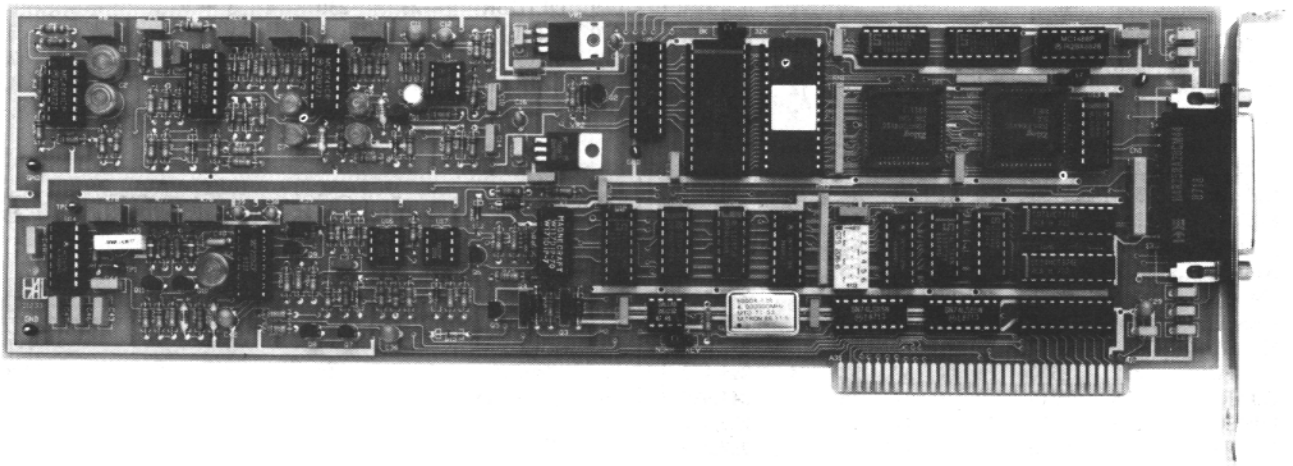
	AF	none						
1990	AS	JL1ZCQ	315,806	409	1,174	69	115	85
	EU	none						
1990	NA	W3LPL	1,728,520	1,377	3,160	102	260	185
	OC	none						
	SA	none						

WORLD RECORD

1990		W3LPL	1,728,528	1,377	3,160	102	260	185

Legend= Z, zones; C, countries; W, state or province.

A Winning Combination . . .
The PCI-3000 and SPT-2 from HAL!



The HAL PCI-3000/PC-AMTOR system is designed to put your PC on the HF bands with outstanding performance at an affordable price. Amtor allows you to get through when other methods fail. If you've ever been DX-ing with someone on Amtor when 20 meters dies out in the evening, you know what we mean. Things may slow down, but you can usually keep up the QSO!

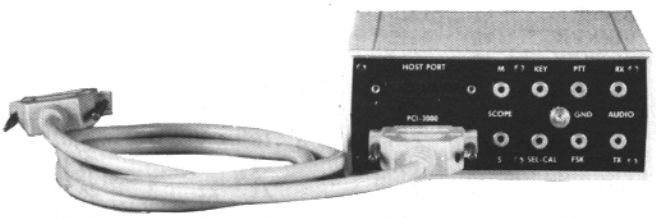
The PCI-3000 doesn't limit you to Amtor. You also get high-performance Baudot and ASCII RTTY, CW, and Search Mode. Search Mode lets you simply tune in the signal—we take it from there. The PCI-3000 automatically finds the correct code, speed, and polarity. No more guessing!

If you want to communicate on HF, do it right with the PCI-3000! Call HAL Communications—your AMTOR source—and put your PC on the air today!

SPT-2 Spectra-Tune:

For ease of tuning your PCI-3000, add the SPT-2 Spectra-Tune. The Spectra-Tune lets you tune in CW and RTTY signals quickly and accurately with a calibrated linear 30-segment bar graph. The bar graph represents a 600 Hz range of the audio spectrum, centered at 2210 Hz for RTTY and AMTOR, and 800 Hz for CW. Calibrated marks indicate the proper frequency for AMTOR, RTTY, and CW tuning.

A cable is included with the SPT-2 for providing power and control from the PCI-3000. The rear panel of the SPT-2 provides convenient "RCA" phono connectors for all radio connections. This avoids having to make radio connections directly to the PCI-3000. Enhance your PCI-3000 system with the SPT-2 Spectra-Tune Today!



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

PCI-3000/PC-AMTOR with software **$395.**
SPT-2 Spectra-Tune with cable **$169.**
FIL-1 Amtor/RTTY filter (installs in SPT-2) **$69.**

(Low tone export models available.)

RESULTS SARTG 1990 WW/RTTY CONTEST

Class A Single Operator - All Bands

Nr	Call	QSO	Points	3.5	7	14	21	28	Score
001	HC5K	464	6750	2	6	60	32	14	769,500
002	I2HEO	386	4845	10	17	48	43	11	625,005
003	G4SKA	346	4225	5	20	57	41	7	549,250
004	F1LVW	347	4645			55	48	14	543,465
005	HA6PX	340	4235	15	16	48	36	3	499,730
006	OZ7GI	290	3615	16	20	47	41	8	477,180
007	NO2T	276	3580		9	61	54		443,920
008	OH2BP	300	3435	12	21	50	34	2	408,765
009	K4JYS	241	3200	6	11	46	44	6	361,600
010	JA3DLE/1	246	3485		1	42	46	5	327,590
011	N6GG	237	2870	5	10	47	35	6	295,610
012	SM6ASD	244	2925	10	13	41	30	1	277,875
013	EA5FEL	238	2935	2	13	35	42		270,020
014	K6WZ/0	211	2760		9	45	41		262,200
015	SM5FUG	212	2570	11	11	37	32	4	244,150
016	G0ARF	223	2715	9	7	37	36		241,635
017	I2WEG	233	2420	15	17	44	19	4	239,580
018	I2TQU	198	2260	12	13	43	31	6	237,300
019	IV3ZDO	200	2470	8	11	29	35	4	214,890
020	J28TY	192	2875		1	12	38	17	195,500
021	Y24MN/A	184	2090	10	21	35	26		192,280
022	OZ1FGS	174	2210		4	39	29	1	161,330
023	K0BJ	147	1820		8	39	36		151,060
024	IK4BWC	166	1845	10	13	26	26		138,375
025	VU2SJV	134	1930		4	11	34	15	123,520
026	W1BYH	125	1610	2	7	33	32		119,140
027	LX1TO	136	1610	7	11	27	20	2	107,870
028	N2HOS	110	1490			36	34		104,300
029	KI4MI	112	1445		9	40	23		104,040
030	KD2YD	104	1370		9	33	31		100,010
031	W4/TF3KX	110	1310	6	6	33	23	1	90,309
032	W6RLL	116	1335	3	4	39	20		88,110
033	SM4AAY	144	1655			46	6		86,060
034	WB6ZHN	105	1185	2	4	43	20		81,765
035	HA6VV	115	1335	2	2	21	32	3	80,100
036	LA0BX	114	1285	6	7	17	26	2	74,530
037	WA8FLF	90	1240	4	6	27	22		73,160
038	IK0CNA	112	1270		4	36	12	2	68,580
039	IK1HSR	94	1110			21	36	3	66,600
040	UW1YY	110	1170			30	24		63,180
041	I4IBR	97	1050	11	10	23	12		58,800
042	UB4HQ	100	1050	9	10	23	12		57,750
043	SM3MID	96	1010	8	4	27	13		52,520
044	W7MI	74	935		5	17	33		51,425
045	ES7FU	96	1035	5	15	10	19		50,715
046	KA9DZM	79	945		12	28	13		50,085
047	JA1BLV	75	1035		1	17	26	1	46,575
048	AH6JF	81	1215		2	22	9	1	41,310
049	VE6KRR	95	1015			20	16	1	37,555
050	W2KHQ	57	840			15	21		30,240
051	Y27AO	70	785		2	29	7		29,830
052	Y23VB	66	745			26	14		29,800
053	W9FFQ	51	645		3	16	25	1	29,025
054	OH2LU	70	790			24	12		28,440
055	SM6APB	55	660			21	22		28,380
056	SM0DJZ	53	560	7	8	17	11		24,080
057	I4XQG	59	645		8	15	14		23,865
058	YV6ACA	46	660			22	11		21,780
059	SM7BGE	69	705	5		14	11		21,150
060	DF5BX	50	530	6	7	11	15		20,670
061	SM4GVR	49	540	1	9	3	21	2	19,440
062	FD1PFK	44	475		2	13	13		13,300
063	EA1ZL	48	510			17	9		13,260
064	Y23YE	40	465			18	10		13,020
065	SM4CJY	36	400	5		12	8	3	11,200
066	PA3ESZ	31	350			15	6		7,350
067	Y32TD	32	310	3	9	10			6,820
068	IK2IKW	24	230		7	10			3,910
069	DL1DBR	23	230	4	3	9			3,680
070	N2KLJ/VE3	15	190			8	8		3.040
071	SM0AJU	19	195		1	6	7		2,730
072	LZ1KAP	14	125	4	3	3	2	1	1,625
073	SM4CMG	2	30		2		2		120

Class B Single Operator - Single Band

NR	CALL	QSO	PTS	MP	SCORE
3.5 MHZ					
001	SP3SUN	41	410	17	6970
002	SM4RGD	17	135	8	1080
7MHZ					
001	IK1MDL	77	715	31	22,165
002	Y28UL	22	215	15	3,225
003	W2UP	13	195	8	1,560
004	YO6BKG	15	150	9	1,350
14 MHZ					
001	YT2GW	355	4545	64	290,880
002	IK1NDB	153	1830	47	86,010
003	IK8EUX	154	1775	47	83,425
004	I2DJX	131	1535	46	70,610
005	VK3EBP	103	1500	43	64,500
006	IK1HXN	105	1225	49	60,025
007	HK4EGW	55	795	35	27,825
008	W4VQ	50	690	38	26,220
009	JR4GPA	59	870	28	24,360
010	I2NAH	58	610	29	17,690
011	IT9IAS	53	625	25	15,625
012	LA2IZ	50	535	27	14,445
013	VK2BOS	42	610	23	14,030
014	SP3XR	51	540	20	10,800
015	JA2NNF	28	395	24	9,480
016	KA1LMR	32	425	21	8,925
017	K8CV	31	425	21	8,925
018	LZ1QN	49	505	17	8,585
019	WB5YLT	25	365	19	6,935
020	I0KHP	32	305	14	4,270
021	SP5GMK	29	295	10	2,950
022	SM6AEN	12	120	10	1,200
023	DK5KJ	10	105	8	840
21MHZ					
001	I1RJP	122	1530	48	73,440
002	SM4SSY	113	1440	44	63,360
003	YO2IS	98	1275	43	54,825
004	TI2YO	114	1295	43	44,030
005	WB4UBD	51	740	31	22,940
006	W6/G0AZT	69	790	29	22,910
007	YO6CFB	60	610	32	19,520
008	SP9BCH	49	575	27	15,525
009	SP2UUU	45	570	25	14,250
010	DK1UL	23	270	16	4,320

28MHZ

001	IV3UT	13	160	9	1440
002	SP3BGD	5	70	4	280

Class C Multi Operator

Nr	Call	QSO	Pts	3.5	7.0	14	21	28	Score
001	7S4RY	477	5868	11	27	66	49	7	93,8400
002	LZ5R	489	5800	17	20	47	56	11	875,800
003	LY2WW	440	5350	13	22	54	37	1	679,450
004	WA7EGA	391	4575	8	23	52	45	7	617,625
005	JW7SP	354	4535		5	53	31		403,615
006	VE7ZZZ	294	3490	4	4	50	19	3	314,100
007	GX3UUP	192	2350	11	12	38	29	1	231,850
008	SK6NP	138	1510	10	8	36	11		98,150
009	LY1BZB	123	1375			43			59,125
010	SP2KEV	43	465			12	5		7,905
011	DF0DG	29	310		3	9	11		7,130

Class D SWL Operator

001	IN3-489/TN	254	2730	15	22	47	35	4	335,790
002	ONL 383	240	2845	11	19	45	38		321,485
003	I1-21171	193	2110	10	17	47	33	3	232,100
004	I1-1169/GE	146	1675	10	16	43	29	7	175,875
005	Y32-08-F	135	1565		5	35	32		109,550
006	DE0GMH	92	995	11	11	20	21		62,685
007	F11ADB	87	935	2	9	19	27		53,295
008	OK1-33209	65	750	4		16	13		24,750
009	G8CDW	54	600		1	23	14		22,800
010	Y32-01-F	47	540		3	19	16		20,520
011	URE-693-CO	39	405			19			7,695
012	I7-237/BA	19	205			15			3,075
013	SP-0181	15	160			7	1		1,280
014	JG7LBN	10	115			8			920

Check Logs:

AL7LD, EA5TW, F8DD, K3QIA, KB2VO/4, KE5PO, K8JUG, LA7AJ, LX1TO, N1UF, N8GCA, NV9S, OZ7FN, SM4SSY, SM4RGD, SM5EIT, SM6EZI, SP2ZCD, SP3SUN, SP9BCH, UA9DJY, UZ3AYR, W2UP, W6RSZ

Operators of Multi - Operator Stations

DF0DG: DF0BX, Sabine, Andre

GX3UUP: G0AIS, G8ABI, G8MPP

JW7SP: JW5WBA, JW7QM, JW7SP

LY1BZB: LY2BKF, UP2BNI

LY2WW: LY2BKW, LY2BMW, Eimas B.

LZ5R: LZ3RR, LZ1CT, LZ1E 457, LZ1UK

SK6NP: SM6BUV, SM6TLC, Fredrik L.

SP4KEV: Liga Obrony Kraju

VE7ZZZ: VE7ARS, VE7AV, VE7DRS, VE7FZ, VE7HBQ, VE7SSS, VE7JJJ, VE7NNN, VE7XYL

WA7EGA: WA7EGA, WS7I, WB7AVD

7S4RY: SM4CMG, SM5CZD, SM4AWC

DX COMINGS

The great thing for September of course is the formal legalization of Ham Radio in **ALBANIA**, starting with an Operation 15 or 16 September, **Martti Laine, OH2BH**, will be participating in this, and the main reason for this operation is to train local operators in all modes. It is more than likely that Albania will no longer be a rare country by the end of this year on any band or mode.

Next, the successful operation by **Romeo** from **BURMA, XY0RR**, will culminate with the last two days on RTTY. However, we have not found out, as yet, when those last two days will be. (Probably when I am in Boston.)

Then there is a creditable report that **Jacky, 3B8CF**, will be for two weeks on **ST. BRANDON**, in September and carries RTTY gear. He does maintenance on Radar Systems and plans to operate as he has time. But many a time before, an operating permit has been impossible to get, so don't bet your life on it.

Dennis, **ST0DX, SOUTHERN SUDAN**, is still waiting for some parts to make his renewed RTTY operation possible. Please have patience, he will be there sooner or later, especially with all the help he is getting from various people, including IRDXA, while Gin, JA1ACB, is attempting to send a back-up RTTY rig.

TU2BB informs me that he and his friends are working on a permit for an RTTY Expedition to **GHANA, 9G**. They have sent all the requests and have friends in high places. They are confident that the expedition will take place in the next 12 months maximum.

The RTTY gear, a KAM, furnished by the IRDXA has arrived in Chile for the forthcoming RTTY operation from **XQ0X, SAN FELIX. Don, CE2GDN**, bought a computer for the operation and the operator, John, should be training in Santiago for a few weeks and get the hang of the KAM and then should be QRV from this ALL TIME NEW ONE and bit later this year.

Eddie, W6/G0AZT, and Don, AA5AU, have scheduled a nice late summer vacation to V2, ANTIGUA, for the CQWW RTTY test, following by a trip to **MONTSERAT, VP2M**, from 30 September to 7 October. Some guys have all the luck and money. Wish they had gone to Willis Island instead, but that was a little steep.

SOUTH SANDWICH is still on schedule for early March 1992.

Had nice letter from **Jim Smith, VK9NS**, telling me his unfortunate experiences in Bhutan. He is nowhere near discouraged, however, and has requested a new operating permit, all bands, all modes form **BANGLADESH**. With Jim's perseverance, do not be surprised if he shows up from there once again one of these days (month), this time all bands, all modes with full equipment and not from the Sheraton Hotel, which is not the best operating position in S.E. Asia. Jim does not get beat easily.

Ron Wright, ZL1AMO, who has brought us so many nice countries from the Pacific, is by no means burned out. With the LapTop, donated by Jim, N2HOS, and the KAM from IRDXA, he is ready for a lot more and is planning on **COCOS KEELING, CHRISTMAS ISLAND**, and also, **ZL0, KERMADEC ISLAND** for March 1992. His problem is funds: although donations will be appreciated at his Call Book address, he is really looking for sponsorship by some International DX foundations, plus he would like to raise funds by selling IRCs at $60 per hundred and foreign stamps at $10 per thousand. Ron feels that this is a better way than to ask people to contribute. I have pledged $100 for ZL8, but please buy your IRCs from Ron and if you collect stamps, this is an excellent opportunity.

73 and GL, de **John, TG9VT** ■

WEST helps EAST

by David Larsen, KK4WW
Virgina Polytechnic Institute
and State University
Blackburg, VA 24061-0212

David Larsen and John Douglas, N0ISL, will be guest speakers at the RTTY Journal dinner at Dayton 1992. They will also have a visual presentation of their trip.

Amateur Radio Ambassadors Open New Relations with Soviet Union

David Larsen, KK4WW, John Douglas, N0ISL, and Bob Fribertshauser, W6YMR, members of the Foundation for Amateur International Radio Service (FAIRS) met with many Soviet officials during May 1991. The FAIRS members known as the 59 Group were on a 3 week goodwill mission delivering equipment to Soviet Amateurs for emergency digital radio communications. Nine computers delivered were donated by Control Data Computer Products and others, 9 TNCs donated by PacCom, two HF Transceivers, 4 HTs and 3 VHF Transceivers. The computer donations were much easier to obtain than getting them into the Soviet Union. About the only way possible was to hand carry them. This was not feasible with about 1/2 ton of computers and equipment. David wrote to Mr. Mikhail Gorbachev, President of the Soviet Union. As a result Mr. Gorbachevs secretariat paved the way for the Radio Sport Federation (RSF) of the USSR to help.

The RSF was a delight to work with and lined up transportation on Aeroflot Airlines with the Ministry of Transportation. They also helped with the customs officials to get the computers to the proper Soviet Hams.

The FAIRS group donated and installed a computer and TNC at the Krenkel central Radio Club (RSF) station UK3F and also at the club station of Radio Magazine, UK3R. The other computers and TNCs were installed at Soviet Amateur stations and members of FAIRS, Victor Goncharsky, UB5WE, Helen Goncharsky, RB5WA, Vladimir Klebanosky, UB5WCV, Victor Golutvin, UB5WPR, Yuri Katyutin, UA4LCQ, and Valentin Kudryavtev, UA4LM.

In addition to working with the Hams the American delegation had time to teach a 4 day Microcomputer Interfacing workshop at Lvov Polytechnic Institute. A 1/2 day round-table discussion on computers in science and economics was also given at Lvov Polytechnic Institute in Lvov, Ukraine and at Ulyanovsk Polytechnic Institute in Ulyanovsk, Russia.

All three of us USA Hams had full operating privileges to use our American calls portable and made about 4000 contacts from Lvov, Ukraine and Ulyanovsk, Russia.

Victor Goncharsky was our Soviet host and really made the trip a great pleasure and a tremendous success.

More donated equipment is already waiting for the next FAIRS trip to the Soviet Union in 1992.

Station U5WF now operates an Aplink system on 14.077 on Tuesdays and Fridays, hours 1730Z for 6 hours. The stations first APlink message was sent July 18, 1992 from U5WF and was the first ever from the USSR. They also use GB7SCA as a forwarding station. At present they are using the DJ0XC software v. 3.94 but by the time you read this, they are hoping to be using APlink v. 5.0.

de David, KK4WW ■

Modification to PK-232 for use with ICOM Transceivers

The audio level from the DIN jack on the back of my IC-765 was too low to use in copying Morse on my PK-232. After looking over the PK-232 schematic, it first appeared that it would be easy to change the 10K input resistor, R34, to a smaller value to increase the gain. When I checked the value of the coupling capacitor, C54, required with a smaller resistance, it was obvious that the .01 uF capacitor was the cause of the low gain at the 800 Hz Morse decoding frequency. The rolloff was -3 dB at about 1600 Hz and almost -7 dB at 800 Hz. The .047 uF coupling capacitor, C89, in series with a 2K resistor, R79, at the input to the limiter op amp also caused a similar rolloff.

I paralleled both capacitors with ceramic units to increase each capacitor by a factor of 5.7, lowering the -3 dB frequencies to about 300 Hz. Using a .047 uF in parallel with C54 and a .22 uF in parallel with C89 produced 13 dB more signal at 800 Hz. The actual capacitor values are not critical, especially if they are larger than necessary. Be sure to use non-polarized capacitors.

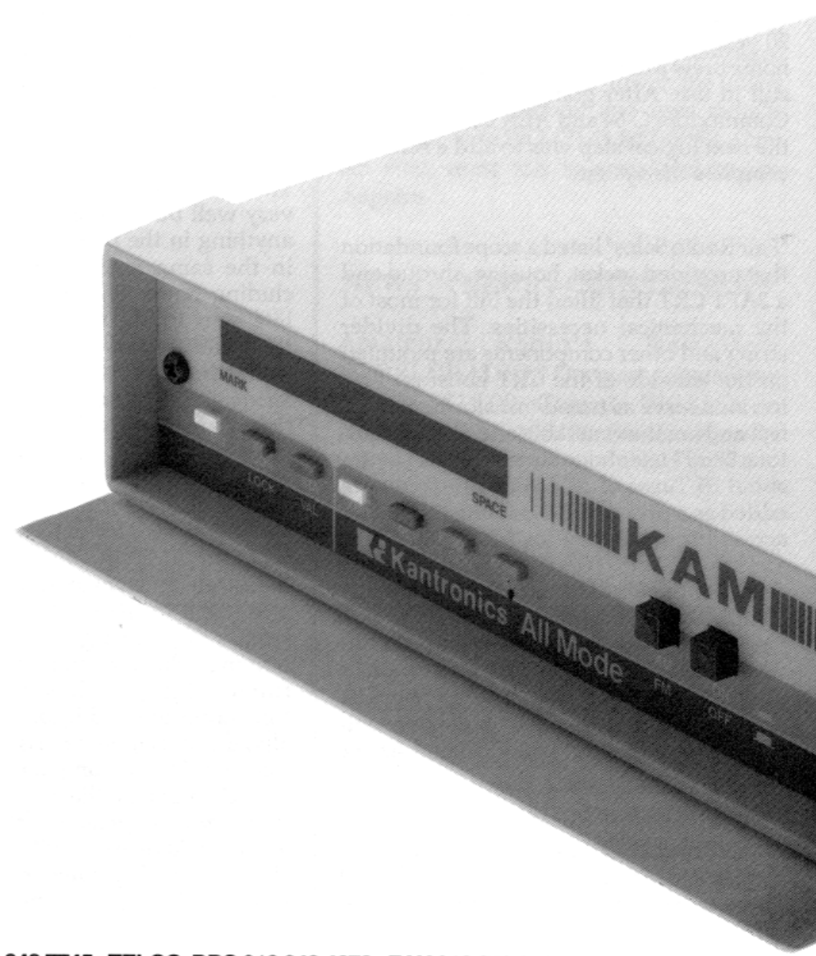
The level of RTTY and AMTOR signals at 2125/2295 Hz also increased by about 3 dB after adding the capacitors. This seemed to help reduce the error rate on fading signals.

de **N6RY, Terry Conboy**, 08/09/91 ■

Ed: *For more information on this mod, contact Terry at 7969 145th Avenue SE, Renton, WA 98059-9207. Include SASE.*

David, KK4WW, Presents TNC donated by PacComm to Vasilij, UV3BW, for use by RSF (Radio Sport Federation) as John, N0ISL. observes

any HF mode **and** Packet...



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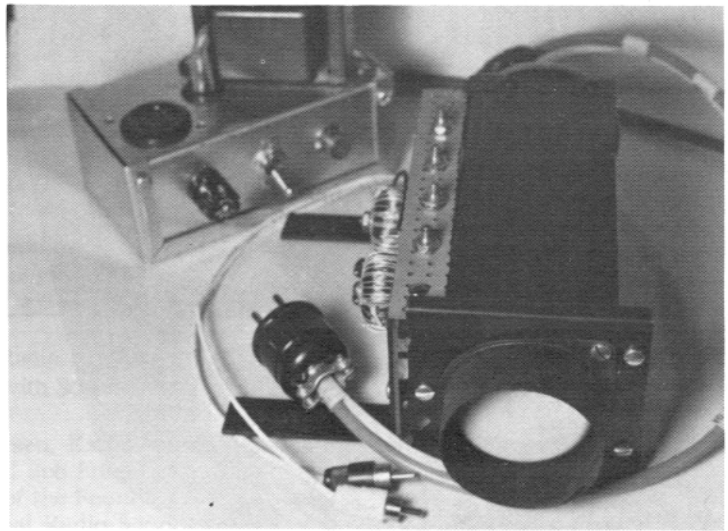


CHEAP & EASY TUNING SCOPE

by: Carl Steavenson, K6WZ/0
535 S. 5th St. Herington, KS. 67449

For many years the older ARRL handbooks have given scope designs intended for modulation monitoring. The same scope can be used for RTTY tuning with a little or no modification. The advantages of a scope were learned by this operator some 20 years ago when I added a 3AP1 to the home brew Mainline demodulator and it is still in use. After going computer with a Commodore C-64 and AEA CP-1 interface, the next logical step was to add a scope to complete the system.

"Fair Radio Sales" listed a scope foundation that provided socket, housing, shroud and a 2AP1 CRT that filled the bill for most of the mechanical necessities. The divider string and other components are mounted on the left side of the CRT housing. Two torriods serve as tuned transformers in effect and are the venerable and once ubiquitous 88mH telephone surplus units having about 35 Turns of 30 AWG insulated wire added as a primary. Resonating capacitors across the secondary for Mark and Space are .006 uF and .057uF, respectively. The capacitance values were arrived at by paralleling .047 and .01 polystyrene units. Single .056 uF and .068uF capacitors should work as well. The power supply is located under the operating table to keep magnetic fields away from the 2AP1 and the monitor. It supplies about 350 VDC and heater voltage.

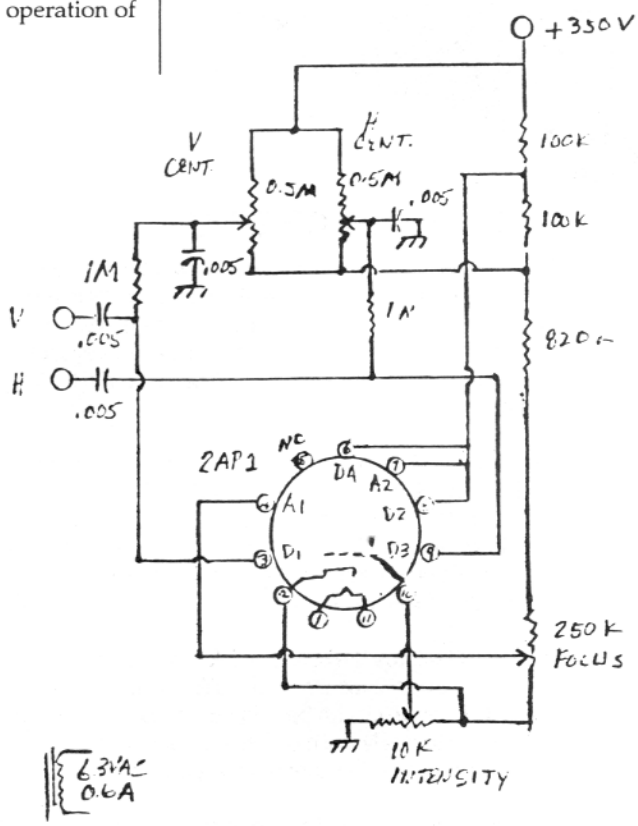
A modification was made to the CP-1 to increase the deflection of the Mark and Space traces. There is a 10K resistor in series with each scope output, R46 and R49. My contact at AEA said that the Mark and Space patterns would not be 90 degrees apart as desired, but more like 60-70 degrees. The small ellipses ere displayed as stated. the two resistors were jumped and deflection was about right, but displacement was still considerably short of 90 degrees. Experimentation with resistance and capacitance across R46 and R49 yielded the final configuration as shown in the pictures. R46 (mark) is bridged with 47 ohms and 0.67 uF (0.47 plus two 0.1 tantalum) R49 is shunted with 68 ohms. There is no adverse effect on the CP-1 operation of the LED tuning indicators.

The LED indicators work very well but respond to anything in the passband in the same manner including noise. The scope lets you know what is there and at times will aid in notching out an interfering signal. When a station is tuned properly, the pattern appears as two elongated ellipses of nearly equal form-with and length. Tuning across RTTY or AMTOR causes the forms to change and also to tilt to the right or left, depending on whether the receiver is tuned higher of lower than optimum. Additionally, if shift is more or less than 170 Hz, the angular displacement of the two traces will be greater, or less than 90 degrees. with shifts of much greater or less than 170 Hz, the scope aids in adjusting the VAR SHIFT control on the CP-1. Deflection is somewhat reduced at wide shifts, particularly at 850Hz, but tuning is more accurate.

The torrids are mounted with brass screws and beveled faucet washers. The four pots needed for the divider string are junk box specials (these should be wire wound) and not even the correct values as given in various handbooks. I found that by decreasing the CRT voltage below 300 or 350 VDC, decreased deflection results. The opposite was true of the old 3AP1. the assembly is secured to the CP-1 with two brackets and the two screws for the right hand rubber feet.

Obtaining a small CRT and torrids may be a problem these days but there are still lots of these items around. This article is a reprint from an earlier article that appeared in the October 1985 edition of the RTTY Journal. Check with a surplus dealer.

If you build this tuning indicator, you will see the big difference over LED type displays currently used by most equipment manufacturers, Pleae don't fault them to much though, CRTs are very expensive if puchsed new. As an example, the CRT used in the HAL ST-6000 is about $150.



Scope schematic using 2AP1 CRT.

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