

# RTTY

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# Journal

VOLUME 32 NO. 4

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ONE DOLLAR



HAPPY EASTER FROM DON, WA6PIR AND HIS XYL, MAXINE, FOUNTAIN VALLEY, CA

## RTTY JOURNAL

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by **GEORGE**

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# HITS & MISSES

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GEORGE HAMMON, WA6CQW  
14215 Pecan Park Lane Space 73  
El Cajon, CA 92021

Giuseppe Loreti, IØAOF, recently became the first station in the world to receive the USA-CA award endorsed all RTTY. This award is sponsored by CQ for working and confirming United States Counties in steps of five hundred. The custodian of the award is Dorothy Johnson, WB9RCY. Congratulations to 'Joe' for his hard work and patience in achieving this fine award.

## THE LOGGER

Computer managed Amateur Radio log books are certainly a fine addition to your computer. I will start a series of columns describing one of these fine programs, "The Logger", created by Ladybug Systems, POB 57304 Webster, TX 77598. The cost is \$35.00.

This is a very sophisticated, disc based program for log book management for Amateur Radio Operators. It will store over 1,900 complete log book entries per disk.

This program requires an Apple II plus with 48K of memory, one disc drive and DOS 3.3 operating system. The program presumes the user is comfortable and familiar with the use of the Apple computer. The extract file requires a second disc drive. The output functions (printed reports, screen hard copy, and QSL related operations) require a parallel interface card and printer and an 80 column card. Some program modification is necessary if your computer lacks the above listed items.

The first thing to do when getting started is to make a back up copy of the program disc and have it handy for later use. Don't forget to delete

any 'hello' program from these disc's. The normal caution is expressed at this time to make frequent back up copies of the data base.

The program is placed in drive #1 and the user power boots the disc and the 'Logger's' hello panel will appear on the screen and remain on the screen while the main program is loaded.

The program disc has a small data base so that you can familiarize yourself with the 'Logger'. It is recommended that you use the 'FID' program to copy the following files; log data, config. data, and bit.map to another disc after familiarization. A fresh initialized disc should be used to begin your real data base. Before an initialized diskette can be used as a data base disc it must be initialized by the 'Logger'.

Once initialization is selected, the data base files bit.map and log.data are established without intervention. The program will signal the user when this process is complete. The user will then be prompted with two systems configuration questions regarding the availability of a printer and a second disc drive. The proper response to both questions is important for correct program execution after accepting the users inputs to both of these prompts, the program will create the data base file config.data.

In my column next month, I will describe how to add data to your new data base and what fields the system 'Logger' provides for.

## RTTY PIRATE

An unlicensed RTTY station operating every evening on 20 meters from a ship in the Caribbean signing EL4YY/MM is an admitted pirate. The operators name is 'Pascal'. So, pass the word and do not work him. (information is from 'WORLD RADIO' and W2JGR).

A new book on RTTY has just made the scene for the RTTY community. It is called 'RTTY TODAY' is published by Tom Harrington and Universal Electronics, Inc. of Columbus, Ohio. The author is Dave Ingram, K4TJW.

This book sells for \$8.95 plus \$1.75 shipping costs from Universal Electronics at, 4555 Groves Road, Suite 3, Columbus, OH 43232, and is another 'must have' book for the serious RTTYer. Harrington also sells the 'World Press Services Frequencies' for \$8.95, 'Shortwave Clandestine Confidential' for \$8.95, 'Guide to Utility Stations' for \$12.95, "Radioteletype Frequency List", for \$12.95, 'Special RTTY and CW Alphabets and Codes', for \$12.95, 'Air and Meteo Code Manual' for \$15.95, 'Radioteletype Press Broadcasts', for \$12.95, 'Maritime Radio Handbook' for \$12.95 and 'Tune the Hidden Signals on Satellite TV' for \$12.95. All of the above require \$1.75 for postage and handling.

I will close my column for the month, the flu bug has about got me down. I spent a whole week in bed and still have not shaken it.

So long for now, George WA6CQW.....



**DX**

JOE WOOD, AJØX

POST OFFICE BOX 84

LAUREL, MISSISSIPPI 29440

I have just returned from a great weekend in Louisiana and a super Ham-fest hosted by the Acadiana Amateur Radio Association. This event was held in a very new Holidome facility located at Lafayette, Louisiana and is a "must go back next year" event. The members of the sponsoring group were the key to this years success with so much cordiality that I hated to leave. Also very present were members of the Acadiana DX Association, a very strong, devoted organization. It was my pleasure to meet two of their RTTY DXers, WØ5ELJ - Jack, and W5HEZ-Jack. I feel that I gained some very valuable insight into the problems of today as well as those that face us as the Amateur population increases. Given a fixed set of rules, "cooperation" and "education" are the name of the game and it is my belief that we should work to that end.

"RTTY DX is easy, a snap, no problem"...or is it?

Not so very long ago, sitting here in the shack with a fellow Ham, I was tuning around the bands demonstrating the rig and ran upon a very popular ZK1 calling CQ. His signal was a good 599 and printing like a 2 meter local. Comments from the observer ran from: "gee this is amazing" to "give him a call, with a signal like that he can't help but hear you; man this is gonna' be like shooting fish in a barrel." The first call went out and when I stood by, I heard "de ZK1...". The usual return, signal report, name etc.. my visitor was all smiles and commented, "see how easy that is, man I have got to have a RTTY setup so I can work this kind of DX". The smile began to deteriorate into a frown when the station turned it back and the print read,

"W6.....de ZK1.....". What happened? We thought for sure that he had come back to us! Comments soon turned into unintelligible mumbles. I told my friend that we should listen the next time he stands by and see what the frequency looks like. We did and from the results of that not-so-casual peak, determined that my signal must have been somewhere between the tenth and eleventh layer of stations calling him. Wow! Where did all of those guys come from? This is not going to be easy at all! Eventually the station was worked but not before drawing some conclusions about RTTY DX-ing. This activity is a new ballgame and the rules that apply to CW and SSB do not necessarily work here. They also vary with the station that you are attempting to work. Some moves work better for some than others and through observation and experience one establishes an operating procedure that will work best for his effort. Needless to say, my friend and I have a deeper appreciation for RTTY DXing.

READER REPORTS: None received directly but Dee was very kind indeed to pass on to me, a heck of a nice report from Carl, K6WZ. I will cover the "highlights" of Carl's letter here and elsewhere in the following section. Our thanks go out to you and keep up the good work.

Carl reports that he observed Bill, WØLHS in QSO with XT2AV, Enno, who was telling Bill that he plans to move to Niger in July.

A few thousand miles away, ZK1XL appeared during the February 25th RTTY JOURNAL/73 DX Contest on ten meters. He later was heard on twenty meters long after the contest was over. I believe we all worked him

(some with more difficulty than others, HI!)

Carl found 6W1CK after several Weeks of searching, says that later he was calling CQ on fifteen meters with no answers.

Ian, T2ITA, received a ROBOT from Tom, N4FJL, but now needs a stepdown transformer.

VK3KF, Eric, worked 3D2CJ in Fiji. Tom, N4FJL, hopes to go there and to Canton.

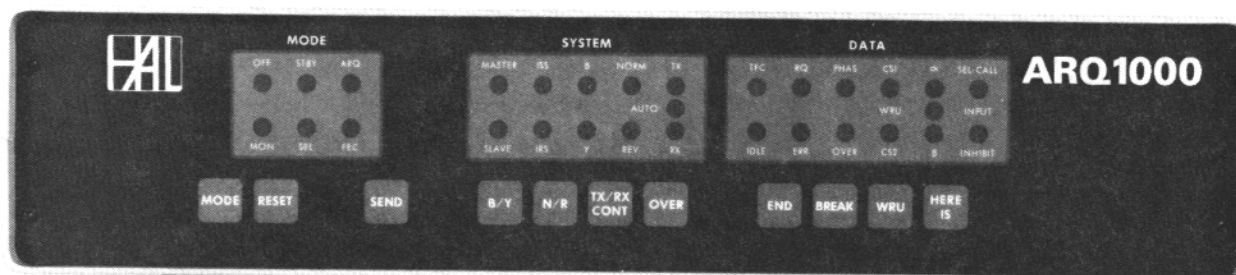
Carl's shopping list is reported to include: FB8WT-Crozet, ZL8APH-Kermadec, OY9JD-Fareo, FK8AH-New Caledonia, EC9HE-Melilla, T77J-San Marino, 3A2FQ-Monaco, UL7BB-Kazakh, and TI9 Cocos. He also reports that he worked two new ones in the contest, GU3HFN from Guernsey and ZK1XL, for 148/125; also JR2CFD and UK-LAK were on 40 meters between 1400 and 1500 UTC. UKØLAK was also QSL'd by Dee on 15 and 20 meters during the contest. QSL via buro to him.

REPORTED AND KNOWN ACTIVE:

C3ØBAF, SV1MØ, C21KH, 9M2GV, 6W1CK, TZ6FE, FØ8KS, XT2AV, ZK1XL, 5W1EJ, GU3HFN, GU5AN, TU2JD, UKØLAK, JR2CFD, C21BD, 3D2CJ, TG9VT, LX1WH, EA9JZ, KD7P/KH2 (Guam), VU2VIM, ZK1AB, CT2AK 4X6FR, 9H1EY, T77J.

Well gang that winds it up for now. Next month we should have a detailed report of the RTTY JOURNAL/73 DX Contest from Dee. Be sure to tune in to the DX NET on Fridays from 2400 to 0300 UTC on 14.095.00. LU4EGE, Juan and Dee, N6ELP have been off the air for a few weeks, Dee because she is putting up a tower and Juan because he is busy translating the JOURNAL TO PAGE 14 PLEASE.

# AMTOR RTTY

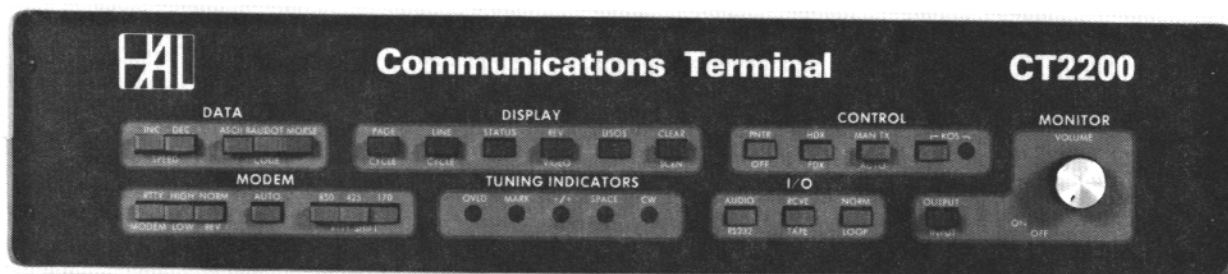


HAL is proud to announce the ARQ1000 code converter. This terminal not only supports the AMTOR amateur codes, but meets ALL of the commercial requirements of CCIR Recommendation 476-2. The ARQ1000 can be used with present and previous generation HAL RTTY products. In fact, any Baudot or ASCII full duplex terminal at data rates from 45 to 300 baud may be used with the ARQ1000. Some of the outstanding features of the ARQ1000 are:

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- Programmable codes stored in non-volatile EEPROM
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- "Handshaking" control for printer and keyboard or tape
- Self-contained with 120/240V, 50/60 Hz power supply
- Cabinet matches style and size of CT2200 and CT2100
- Table or rack mounting
- Built-in DM170 modem option available
- Encryption option available for commercial users
- 8½" x 17" x 10½"

The ARQ1000 is commercial-quality equipment that will give you the outstanding performance you expect from a HAL product. Write for full details and specifications of the ARQ1000.

## BY POPULAR REQUEST



By popular request – the new CT2200. Our slogan is "When Our Customers Talk, We Listen" – and we have been listening. The CT2200 includes these often requested features:

- New AMTOR connections for use with ARQ1000
- Keyboard programming of all 8 "brag-tape" messages
- Programmable selective call code
- Expanded HERE IS storage for a total of 88 characters
- Non-volatile storage of HERE IS, "brag-tape," and SEL-CAL code
- 3½" x 17" x 10½"

All of the proven CT2100 features are retained. Some of these features are:

- Tuning scope outputs (a MUST for AMTOR)
- Built-in demodulator for high tones, low tones, "103", or "202" modem tones
- 36 or 72 character display lines
- 2 pages of 72 character lines or 4 pages of 36 character lines
- Split screen or full screen display
- Baudot or ASCII, 45 to 1200 baud
- Full or half duplex
- Morse code send/receive at 5 to 99 wpm
- Send/receive loop connection
- Automatic transmit/receive control (KOS)
- Audio, RS232C, or Loop I/O
- On-screen tuning and status indicators
- Clearly labeled front panel switches, not obscure keyboard key combinations
- Separate convenient lap-size keyboard
- Internal 120/240, 50/60 Hz power supply
- Attractive shielded metal cabinet

In addition, an update kit is available so that all CT2100 owners can update their CT2100's to include CT2200 features. The kit even includes a new CT2200 front panel! Rather than making a proven product obsolete, HAL put even more behind the buttons. Pick up a CT2200 at your favorite HAL dealer and join the RTTY fun. Write for our full RTTY catalog.



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# MSO'S

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by Dick Uhrmacher, K0VKH

## INSTALLMENT #5

Hi Gang! Hope by the time this column hits the streets, that Old Man Winter is banished once again, and that your Winter was an easy one! This month's column will delve into some of the "do's and don't's" of MSO operating, designed not so much to "lay down the law", but to make things a bit clearer in the remote users' eyes. We'll start a new feature this month as well, the "MSO of the Month" portion, designed to acquaint you with some of the System Operators (SYSOP's).

MSO's have received some criticism in the past, (and most likely rightfully so), because some of them contained what was felt were 'business communications'. Specifically messages dealing with "For Sale", and "Wanted" items. Ham Radio has traditionally been categorized as "Amateur" radio, the communications of which are so unimportant that recourse to public (business) communications systems is not necessary. This definition is what has kept Amateur Radio free of competition with established communications businesses, whether they be radio, TV or the written word. Consequently, it is very important that we do not allow this competition to exist, whether it be MSO's, or any other mode within Amateur Radio. Businesses who derive their income from providing these very services will NOT allow Amateur Radio to challenge them in this area, and to press this issue can only have serious side effects for Ham Radio!

This author is the first to admit that the Federal Communications Commission has not directly addressed the issue of 'for sale' and 'wanted' items in MSO's. I'm also the very first to state that we should not FORCE the FCC into a position of rule

making in this area! We can only lose! However, a little research does provide some insight of the FCC's position in this general area. In a letter explaining that Section 97.112 prohibits "Swap and Shop" activity on Amateur nets, the FCC said: "A licensed Amateur could use his/her station from time to time to discuss the availability of a piece of their Amateur Radio equipment, but such activity would be limited to that of an occasional nature and could not include any items of a personal nature such as a camera, ordinary radios, etc., nor could this activity be conducted on a regularly scheduled basis". (This information was subsequently included in "League Lines", QST Magazine, Page 10, August 1974 issue).

This statement by the FCC appears to be the most pointed response to this question, and as far as this author knows, the most current. If anyone has any more recent official information concerning this subject, I'd greatly appreciate hearing about it.

The operative words in the FCC's statement, "occasional nature", and "nor could these activities be conducted on a regularly scheduled basis", appear to this author to preclude using MSO's to list 'for sale' and 'wanted' items. It would appear that two Hams may quite legally discuss it occasionally, stick strictly to Ham radio equipment, and do not routinely schedule their discussions of these sales. But how does this apply to MSO's? After a lot of discussion concerning this subject, the MSO SYSOP's on the National Autostart Frequency, (14 085 625 Hz), have all decided not to tempt fate, and do not allow 'for sale' and 'wanted' items in their MSO's. Their rationale is that MSO's do appear regularly on the same frequency, and that

in the MSO's appear quite more frequently than on an "occasional nature", thus giving the appearance of "advertising". To demonstrate the extremes involved, this author is in receipt of a letter which complains that an automobile was listed 'for sale' in one of the MSO's on 40 meters! If true, that type of activity can only be detrimental to Ham Radio, and no matter what your personal judgement on this issue is, SYSOP's must continually monitor the activity on their systems, to preclude obviously illegal use!

**1984 Dayton Hamvention.** Ah yes, it is the season for the annual migration of thousands of Ham radio enthusiasts to Dayton, Ohio, to attend the Dayton Hamvention! We look forward to seeing all of our RTTY friends again this year, as well as 'twisting the knobs' on all of the new equipment proudly displayed by the various manufacturers. As in the past several years, the National Autostart Frequency, will again have a RTTY dinner. It will be hosted again by Gaylord and Louise Crawley (WB8ICL/WB8JIB), and held at the Imperial House North, I-75 and Needmore Road on Saturday evening, April 28, 1984. One and all are invited, with the proviso that seating space is quite limited, and anyone desiring to attend should leave a note in the WB8ICL or K0VKH MSO's, asking for a reservation. This dinner is strictly a social event, the vehicle for introductions, chit-chat and hopefully, lasting friendships! We've enjoyed it in the past, and if you're going to be in the area, we would enjoy meeting you there! The RTTY group makes their 'home away from home' the Imperial House North so you are liable to meet them all there.

**MSO HINT OF THE MONTH.** Your cooperation is solicited! No one likes to

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**MSO CONTINUED**

be responsible for causing QRM to another station, and courtesy will pay handsome returns. Our communications to/from the MSO's are routine to the point that it's never so important to receive them, that it is necessary to QRM someone else. It only takes a little while to LISTEN on the frequency to make sure that your transmissions will not interfere with someone else, and only a very little more time to ASK if the frequency is in use. Let's ALL make it a habit to do our part in providing clear channel operating conditions for one and all, not just MSO users!

**MSO OF THE MONTH.** This month we feature one of the original MSO's on 20 meters. Gaylord, WB8ICL, and his lovely XYL Louise, WB8JIB, have maintained a very sophisticated MSO on the National Autostart Frequency for about four years now. Gaylord is a retired fire fighter, who also has hobbies of flying 'ultralight' and other fixed-wing aircraft, as well as camping and fishing in his new travel trailer. Look for him 'mobile RTTY' during the summer months!

They use a Radio Shack TRS-80, Model III, with a Crown ROM-116 Interface, and HAL ST-6000 demodulator. The HF equipment consists of a Kenwood TS-820S, crystal controlled, and a KLM KT34A beam antenna at 50 feet, but here's where the difference lies. Gaylord is utilizing RTTY software developed by Bob, WB4EJE, and further modified by Mike, WB4SGU, and himself to the extent that he has the most sophisticated MSO for the TRS-80 Model III, that I've ever seen. As well as having the normal MSO commands, the remote user can cause Gaylord's MSO to change speeds, to relay buffer contents on a real-time basis, and to read and delete files on a 'mass basis', all features that are not available on other MSO's. Keep up the good work Gaylord, and I encourage others interested in using their TRS-80's in a MSO mode, to take a look at this machine!

We'd love to hear about MSO's,

automated RTTY systems, RBBS systems, computer related RTTY items, VHF or UHF RTTY systems, etc., in YOUR area! And we're more than happy to provide some exposure of these systems via the MSO column in the RTTY JOURNAL. If you or your friends have questions about MSO activities, equipment, operating parameters, frequencies or modes, why not drop me a line at the above address (or to the RTTY JOURNAL in care of the MSO column), and I'll certainly attempt to get the answer or information for you.

This wraps up this month's column. Be looking for you on the MSO's, and hope that many of you can make the trip to Dayton! Have fun on RTTY!  
DE: Dick KØVKH .....

00000000000000000000000000000000

**SCATS RTTY ART CONTEST**

The SCATS 1983 RTTY art contest winners are as follows:

First place "Barney in a Hammock" by Sandi Clark, WB4VEU, Hurt, VA

Second place "Theodore Bear" by Winky Merck, AD4M, Pemproke Pines, FL.

Third place "Garfield" by Al Vorgna, WA2OQJ, Hicksville, NY.

Honorable Mention "CQ Terra" by Robert Weiner, DC3NG and Horst Wobig, DF7RY, Bavaria, West Germany.

There were only four contestants so the only problem was to see who received what place.

**DARC European RTTY ART CONTEST**

First place "S.O.S. W.W.F." by Jan Cassimon, ON7EU, Mechelen, Belgium.

Second place "Husky" by Paul J. Tew, G3MEJ, Morden, Surrey, England.

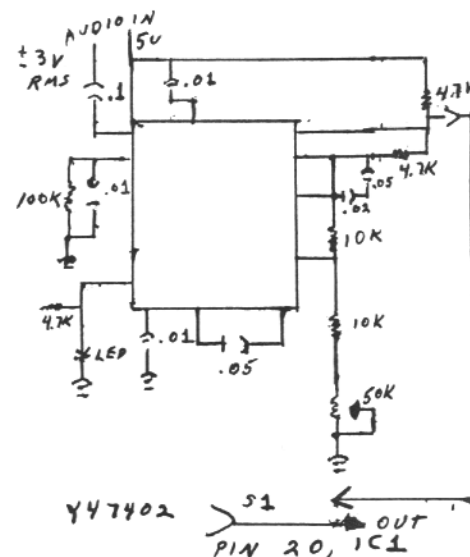
Third place "Gärtnerin aus der Biedermeierzeit" by Ingeborg Berger, DG3YBN.

Honorable mention "Thiery's Figur" by Otto Schmidt, DL30V.

**RTTY TU CIRCUIT FOR THE SINCLAIR ZX81**

This simple terminal unit for RTTY can be directly hooked up to the ZX81. There is a two position switch to allow for reverse but an additional position is strongly recommended in order to keep it from getting the tape straight while loading. The LED works well on 170 MHz shift as a tuning indicator, and will go out when the PLL is locked on frequency. Using a scope for tuning shifts greater than 425 MHz is advisable.

Note that the 50k resistor is by the 50k resistor, ground is preferable 10 turns.



**HEATH on RTTY**

Richard Lucka, WD8BNR, 64 Franchers St., Pickering, OH 43147 wants to know if there are RTTYers interested in having a program for the Heath/Zenith computers with split screen capabilities, ASCII/Baudot, all standard baud rates, edit mode for editing, composing 'PIX' files and RTTY text, type ahead buffer, full editing, Morse CWID features and internal clock. All of this in CP/M assembly language. Any ideas for additions, enhancements etc. should be directed to Richard for possible inclusion.



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**Receiver.** Utilizing an ICOM developed J-FET DBM, the IC-751 has a 105dB dynamic range. The 70.4515MHz first IF virtually eliminates spurious responses, and a high gain 9.0115MHz second IF, with ICOM's PBT system, gives the ultimate in selectivity. A deep IF notch filter, adjustable AGC and noise blanker (can be adjusted to

eliminate the woodpecker), audio tone control, plus RIT with separate readout provides easy-to-adjust, clear reception even in the presence of strong QRM or high noise levels. A low noise receiver preamp provides exceptional reception sensitivity as required.

**Transmitter.** The transmitter features high reliability 2SC2904 transistors in a low IMD (-38dB @ 100W), full 100% duty cycle (internal cooling fan standard), 12 volt DC design. Quiet relay selection of transmitter LPF's, transmit audio tone control, monitor circuit (to monitor your own CW or SSB signal), XIT, and a high performance speech processor enhance the IC-751 transmitter's operation. For the CW operator, semi break-in or full QSK is provided for smooth, fast break-in keying.

**Dual VFO.** Dual VFOs controlled by a large tuning knob provide easy access to

split frequencies used in DX operation. Normal tuning rate is in 10Hz increments and increasing the speed of rotation of the main tuning knob shifts the tuning to 50Hz increments automatically. Pushing the tuning speed button gives 1kHz tuning. Digital outputs are available for computer control of the transceiver frequency and functions, and for a synthesized voice frequency readout.

**32 Memories.** Thirty-two tunable memories are provided to store mode, VFO, and frequency, and the CPU is backed by an internal lithium memory backup battery to maintain the memories for up to seven years. Scanning of frequencies, memories and bands are possible from the unit, or from the IC-HM12 scanning microphone. In the Mode S mode, only those memories with a particular mode are scanned; others are bypassed. Data may be transferred between VFO's,

from VFO to memories, or from memories to VFO.

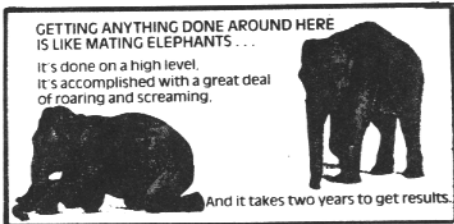
**Standard Features.** All of the above features plus FM unit, high shape factor FL44A, 455kHz SSB filter, full function metering, SSB and FM squelch, convenient large controls, a large selection of plug-in filters, and a new high visibility multi-color fluorescent display that shows frequency in white, and other functions in white or red, make the IC-751 your best choice for a superior grade HF base transceiver.

**Options.** External frequency controller, external IC-PS15 power supply, voice synthesizer, computer interface, internal IC-PS35 power supply, high stability reference crystal (less than  $\pm 10$ Hz after 1 hour), IC-HM12 hand mic, desk mic, filter options:

SSB: FL-70  
 CWN: FL-52A, FL-53A,  
 FL-32, FL-63  
 AM: FL-33

# ICOM

## The World System



# THE MAIL BAG

DEE CRUMPTON, N6ELP (ELEPHANT LOVING PUBLISHER)  
POST OFFICE BOX 97  
CARDIFF-BY-THE-SEA, CALIFORNIA 92007

Guess it was inevitable, my finally writing a column of my own. But, there was no other way, there were too many 'loose' ends that kept not getting tied into neat little bows.

I will try to put into this column just what the heading says, everything fit to print from the mailbag that will not fit neatly anywhere else.

Paul Dean, 2735A Falcon Courts East, 438 Mag, McGuire AFB, New Jersey 08641 had an RTTY program for the computer CREI supplied with their course if anyone needs one. Didn't know there was such an entity but am passing the info anyway.

Dave Earnest, W7KJJ operates while in Saudi Arabia as HZ1AB which is the Dhahran Amateur Radio Club station. He is the only one at the station using RTTY but is getting others on it as well. He says they have the following equipment: Hal Telereader CWR 6850, M200F with printer KWM2A, R7 and a 3-1000Z p.a. for RTTY. We have received his RTTY contest forms already he will be happy to note, as last year he forgot to send them and found them in his briefcase months later. One of these days perhaps Dave will part with a picture of himself so we can see what he looks like.

Dave tells me that if there are any RTTYers on SSB they can always request a RTTY QSO if they work them on SSB.

Norton Bell, W6PLR, 1805 Cowper Street, Palo Alto, CA 94301 says he wants to borrow an instruction book for a R-390/URR (not R-390A) made by Motorola for Collins. He will pay \$10 plus postage to be able to copy the book and will also put down a deposit if required. Anyone knowing of such an item please contact Norton.

Enno, XT2AU tells us that he has not one but three QSL managers. For the USA it is WA1ZEZ R.E.Siemann, Eager Rd., N.Franklin, CT 06254. Europeans should QSL via DJ5RT, Riesenkopfweg 7, D-8209 Schlossberg, Germany. Asia should QSL via JA3RRN, POB 6 HIMEJI, Hyogo 670, Japan.

Enno also says that he does not know if he will be able to get a 5U call when he moves to Niger this summer. Let's hope that he can get the 5U call.

If this column sounds like it should be under the DX column lead, you are right. Most of the information printed here has been sent to me personally or with the senders subscription to the JOURNAL and was received too late to send to Joe. In the future it should be less DX news and more, I hope, of general interest.

I received a very nice letter from Helmuth Meyer, DJ2EI, he is 40 years old and was in the German Army Signal Corps as a Radioteletypist. He got his license in 1965 and was active with "Radio Free Europe" as an RTTY technician. Now Helmuth is a sales and service engineer for German firms selling Teletype equipment. At home "Teletype Meyer" (as he is called) has a Teletype Museum with 40 different machines from the old M14 to the new M43, also some Creed and Olivetti machines. He has about 3 cubic feet of manuals from A to Z.

Helmuths rigs include: Yaesu FT7576X, FC757AT antenna tuner, Windom antenna antenna diversity unit, RTTY converter FSE30 and FSE401, AMT-1 Amtor unit, a 100w Rohde and Schwan transmitter and some old RTTY converters homebrewed over the last 20 years. I am looking for the station photo that Helmuth says will soon follow. It should be quite a pix.

If you are a deaf or hearing

impaired Amateur you should get acquainted with Barry Strassler, KA3KDF he is director of the AMRAD sponsored association "Telecommunications for the Deaf, Inc.", 814 Thayer Avenue, Silver Springs, MD 20910. Telephone 301-589-3006 (voice/TTY). AMRAD as you all know has four main interests, namely: packet radio, spread spectrum, RTTY and deaf communications. With the latter, AMRAD operates Handicapped Educational Exchange (HEX) which is an electronic public and private bulletin board for the handicapped, including the deaf. You can access it on TTY and on Bell 103 modem (300 baud) at 301-593-7033. Also AMRAD developed personal computer TOD interfaces for the deaf; and again, a 2-meter TTY (not RTTY) rigs for the deaf. If you are deaf or have a hearing problem or know of an Amateur with hearing related problems you might give them Barrys' information. It is a good group and they are sure trying to help.

John North, KB2QP is now EA7EVD from Spain. John is now a "gentleman farmer" there (my definition) and writes all about the fruits and veggies he and his wife have planted at their new QTH, Puerto Santa Maria, Cadis, Spain (apartado 35). John and I became pen pals when I wrote to him asking about Málaga, as I attended the University there years ago. John says it has changed and no longer can you get Langostina (a special kind of lobster found in the Mediterranean Sea and along the southern California shores), as we used to and no longer are giant shrimp served as a matter of course with a glass of wine or beer. Ah yes, memories! John should have his antennas up by now so look for him on the bands.

From Irv Emig, W6GC sends the following schematic and he says I helped with the solution. Anytime I can help out I am tickled to do so but I cannot take any credit for it Irv, you did the work.

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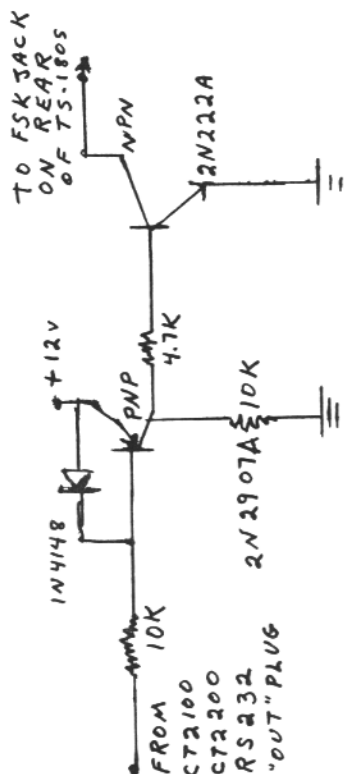
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MAILBAG CONTINUED

"The following circuit allows the use of FSK when using a Kenwood TS-180S and a Hal 2100 or HAL 2200 Terminal. Normally the HAL system uses AFSK and the lower sideband. With the 180S this prevents the use of the CW filters installed in the transceiver. Using the circuit shown below the FSK mode can be used thus allowing the the use of CW filters and much better operation, especially during contests on 20 meters!"



Irv states that he and Don Wallace will be at Dayton this year and hopes to meet me and the other RTTYers at the Imperial House North. As of this writing I will be at Dayton and hope to see you all there.

Some other RTTYers gone from the states are Chris and 'Jake' Jacobs, WB5TWK and K5WTA respectively. Chris will be leaving Rota, Spain in April and be back in Orange Park, Florida. Jake was the MM2 station that some of you found during the JOURNAL contest. Incidentally, Jake will be counted as a country during the test. Jake fell in love with my Hal Tele-reader while stationed in the San Diego area and is using it aboard his

ship the USS America. Along with Jake on board is Wayne, N4IXM who worked 41 states in about a month with Jakes Telereader with 30 watts and a dipole. Nice work! Jake and Chris are in the Navy and should be together at their Orange Park, Florida home for about a month before he heads back to sea.

Jake and Chris portray some of the joys and sorrows of living near San Diego. We do meet some of the finest Navy people here on Amateur Radio and in the RTTY mode but doggone it they leave and are very much missed. Glenn WB7SPD is the next one to be leaving here, deploying to Japan in the next few months.

Did you know that there has been a successful interconnection of 2 packet radio stations using intermediate lines via the new AMSAT satellite? Demonstrating this use of packet were the following packet radio stations: W3IWI, KA6M, NK6K and AI8A/6. Packet radio has sure come a long way.

Also of note to the RTTY Amateur Radio world is the CARRS (Chicago Area Radioteletype Repeater System) project of transmission of ASCII and Baudot at the same time. Installation of a new phone controller is also currently under development and both CARRS projects should be ready to go by this summer. More information on these projects as the info comes in.

If you are in the Chicago area, the Argonne Amateur Radio Club has a repeater on 144.59 in/145.19 out. You can find any information about the area and RTTY in particular from them. The AARC is the only VHF newsletter that is sent to us outside of the Los Angeles/San Diego area. If any of you have information on VHF activities please send it in to me.

The RTTY activity in the San Diego area is limited to two meters at the moment. The 220 RTTY repeater is looking for another site to locate their repeater on with little success at the moment. So RTTYers may be found on 145.70 and in Los Angeles on 146.70 with the SCATS repeater.

From former RTTY JOURNAL editor, Mike Stone, WBOQCD comes the following information on a new 'Interface-less' machine language software that copies and transmits 60 wpm Baudot on RTTY, on the TRS-80.

The program is called 'COCORTTY' and is from Wapisware, POB H, Lowden, IA 52255 for \$24.95 (cassette) or \$29.95 on disk, plus \$1.58 for shipping and handling for either program.

This program requires NO INTERFACE (other than a single audio feed wire) Mike says. COCORITY is a machine language program that actually copies (and transmits) standard 45.45 baud Baudot RTTY signals (68wpm) at 170 Hz. shift using a 2125Hz. mark and 2295Hz space signals. Once properly tuned, the RTTY data is regenerated into video display form and printed on your CRT! AS the RTTY information enters the COCO microprocessor, it scrolls in a right to left direction on the monitor up to a total of 32 easy to read characters. Total readable text message text is 16 lines by 32 characters per line for a maximum total of 512 characters displayed at any one time. Operation of COCORITY has been kept as simple as possible and a special basic language 'INSTRUC' (C) LOAD instruction program is provided at the beginning of the cassette version which is pretty unique in itself that tells the user about the special keyboard mode control command functions. Once the user has become familiar with this an additional MESSAGE GENERATOR (MSG GEN) program inserts up to a 38 character CW-ID memory buffer. A menu driven feature built-in allows the final formatted CW-ID callsign and buffered message generator info to be stored to another tape or disk eliminating going thru the INSTRUC or MSG GEN over and over.

Keep in mind that this is a low cost designed system trying to do what other expensive systems accomplish. It works well, is extremely simple to operate and allows another new mode of specialized communications in the Ham-shack at a budget price.

TO PAGE 14 PLEASE

# INFO-TECH PRESENTS:



## THE M-44 AMTOR CONVERTER

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## CLASSIFIED ADS

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

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WANTED: REINKER KITS for M14, M15, and Kleinschmidt machines. Any quantity. Also need replacement felts. Bill Johnson, N5KR, 1808 Pomona Dr., Las Cruces, NM 88001, (505-522-2042)..

BUMPER STICKER-"My Favorite Radio Station is (your callsign)." Display on car, in shack, anywhere! Nice gift for Ham friends. Only \$3. ARPRESS, 1556(R) Hicks Pike, Walton, KY 41094.

BARN FULL OF USED 28,33 and 35 machines AS IS. Lots of used parts (some for 43). Two GE Terminet 1200 RO printers without covers, with new parts and service manual all 3 for \$300. Consider trades or offers. A. Dickey, K7GCP, 51 N. 850 West, Orem, UT 84057. (801) 225-0678 or 227-9666.

MICROLOG ACT-1 with new AMTOR upgrade including all manuals & cables in perfect condition. \$850 UPS-PD. L.H. Connelly 305-842-1861.

28ASR/gearshift/reperf \$175; 28ASR/reperf \$100; paper winder \$25; M-19 (mint) \$70; 15 pedestal \$10; 14 reperf \$30; 550 pix tapes/cabinet \$50; Oscilloscope \$30; Infotech M200F/300/9" monitor \$600; SWTP Baudot terminal \$30; 12" monitor \$20; 120 VDC/5A supply \$5; DT600 \$40; UT4/XBG \$120; UT2 \$20; Crystal AFSK \$20; 2Ap1A/bezel/filter/shield \$20; 500 MHZ counter \$60; audio generator \$30; 5-88MH toroids \$5; VTVM \$15; sonar 10w 2 meter fm/ps \$70; 60' crankup tower \$100; metal desk \$10; 6'x19" rack cabinet/ac strip \$35; high current +12v/-12v/+5v supply/crowbar/current limiting \$50. Call Dave, K3KD 215-754-6286.

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FRED SAYS:"Cash in those unused teleprinter repair parts." Trades too. Send SASE for list of parts, supplies gears, manuals, tools, toroids. Fred Schmidt, N4TI, TYPETRONICS, Box 8873, Ft.Lauderdale, 33310. 305-583-1340 after 9PM.

WORLD RADIOTELETYPE FREQUENCY LIST-9th edition by Joerg Klingenfuss,FRG. New list of 2463 frequencies monitored in 1983. Frequency, callsign, name of station, ITU country symbol, times of reception and other details are included. All types of RTTY stations are listed-press, aero, wx, telex, military, diplo, maritime and others. New 9th edition now has hundreds of commercial SITOP-SPECTOR (AMTOR) and FEC stations listed. 86 meteorological stations on 279 frequencies are included. 438 RTTY abbreviations. Authorized by Klingenfuss in USA. \$12.95 PPD US and Canada. Send for free RTTY list of books. Universal 4555 Groves Rd.#3A,Columbus,OH 43232.

into Spanish for production in South America sometime around June or July. The DX net will be on the air again by the time you receive this so tune in and join Dee, Juan and the other DXers there. The list of check-ins for February reads as follows: LU8-ESU, WAOUEN, WAOLP, WD5ELJ, HK3NBSG, and K6WZ. The DX contest starting at the same time as the last Friday in February made it difficult to have a net and so it was, of course, cancelled.

This is your column so please let me hear from you and together we can put those reports to good use. Thanks to Colin-WB2IKL, W9CD, TG9VT, K6WZ and K6WZO.

73 and the best of DX de Joe, AJØX. Addendum: KD7P/KH2 Guam, QSL via KS7L Y25DL QSL via buro.  
 LX1WH QSL via buro  
 UKOLAK QSL via buro  
 HZ1AB Saudi Arabia QSL via K8PYD.  
 CT2AK Azores QSL via W3HNK.  
 ZS6ADO South Africa QSL via WA3HUP  
 6Y5SH Jamaica QSL via AK1H  
 9H1EY Malta QSL direct callbook okay  
 HB9CQV Switzerland QSL via buro  
 Y39XO Germany QSL via buro  
 ON5TY Belgium QSL via buro.  
 TI2DO Jorge Pastor, Apartado 114, Moravia 2150, Costa Rica.  
 LU4EGE-Box 64, Haedo 1706-Buenos Aires, Argentina.  
 C2IRK Jim, POB 314, Nauru.  
 C2IKH Kenny, Box 214, Nauru.  
 C2IFS Frank POB 83, Nauru.  
 C2IBD Det, POB 225, Republic of Nauru  
 DJ2EI-Helmuth Meyer, Hofmillerstr 2, D-8050 Freising, W. Germany.

#### AWARDS

"Det" Detudamo C2IBD WAC 2-2-84

Ed Pledger, KA7BDB, DXCC #100, 31, January, 1984.  
 ED Pledger, KA7BDB, WAC all on 20 meters-31-January 1984.

Buraro "Det" Detudamo, C2IBD WAC all Bands 2 February, 1984.

Please send all requests for awards to the RTTY Journal office.

If there are any Hams wanting to upgrade while having fun, may I suggest taking a vacation at the same time and join the Ham School at Mouth of Wilson, Virginia directed by Carl Peters, K4DNJ. If you have seen their ad in Ham Radio on page 95 of the March issue, you can spot me in the front row on the far left. I did upgrade and had fun doing it. (Note to Bob, W7UE-MT, they do NOT use Bash books).

I wonder how many of you are interested in the summer Olympics? Bob, WØHAH, recently retired from Ma Bell, is going to have some fun while doing some civic work for the Olympics he will be escorting some of the 'torch bearers' crossing the country with the Olympic flame. I don't know how many of you are into this type of Amateur Radio 'action'. It is fun and interesting to boot. I will be helping with the Olympics during the San Diego County 'horse' event (the only event to be held outside of Los Angeles County), on 220.

Bob besides being very civic minded also has another interesting hobby (Ham Radio is no hobby it's a full time 'experience'), that of being a clown called 'RAGS'. That would be fun. Hats off to Bob for making the lives of children a little happier.

One last item of new gear out for RTTY is for the Apple II, Apple II+, or Apple/e using DOS 3.3 called "RTTY MACHINE". It is from COTEC, 13462 Hammons Ave., Saratoga, CA 95070. Price is \$29.95 PPD. It comes double-sided on a 5.25" diskette with full instructions for installation and use.

If you have or have heard of any other new or old RTTY programs that you have read about in the JOURNAL please share them with your fellow RTTYers via these pages. The JOURNAL is for you and also BY you, for without you there would be no RTTY JOURNAL. Articles on other non-glass RTTY subjects are also most welcome here in these pages. Please keep us in mind when finishing up those mods to your shack. Dit from Dee, N6ELP.....

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#### CONTEST

The second DARC 'Corona' 10 meter RTTY contest of the year will be May 6, 1984. The third on September 1st and the final one on November 3rd. For all of the information and forms send an SASE to: Klaus, DF7FB, POB 1147, D-6455 Erlensee, West Germany.

**TRS-80 MODEL III BASIC PROGRAM FOR THE RECEPTION OF BAUDOT CODE.**

BY Alejandro Lieber, LU1FCR  
Bv. Argentino 8060  
2000 Rosario, Argentina

If you have a Radio Shack TRS-80 Model III with RS-232 board, this simple BASIC program will let you receive 50 and 75 baud Baudot code. If you have a printer, you can also have a printed output of the received message.

If you want to receive 45 baud Baudot code, see my article in the November 1983 RTTY JOURNAL, for a simple modification of the Radio Shack RS-232 board.

This program uses the \$RSINIT and \$RSRCV ROM subroutines found only in the Model III. As these two subroutines are not included in the Model I level II ROM, this program cannot be used with this model.

You must feed a RS-232 level Baudot signal (+1- 3 to 15 volt) to pins 3 and 7 of the RS-232 underside connector.

Here is a short explanation of the program:

Line 3: defines all variables as integers for maximum executing speed. Dimention array A\$(X,B) to contain all letters (X=0) and all characters (X=1)

Line 4: sets no parity, 5 bit word, 1 stop bit, parity off and transmit disable.

Line 5: sets wait for a character.

Line 6: calls \$RSINIT ROM subroutine.

Line 9: sets for 50 baud.

Line 10 to 42: defines array A\$(X,B) with the complete list of Baudot letters and characters.

Line 100: places the received Baudot decimal value in address P=16872.

Lines 120-130:flip flops the A\$(X,B) array between letters and characters.

Line 200: prints the character in the screen.

Line 300: when you press:

"S": the message is only displayed on the screen.

"P": the message is also printed on paper.

"6": selects 32 characters per line.

"3": selects 32 characters per line.

"L": resets to letters.

"7": selects 75 baud.

"5": selects 50 baud.

Lines 1000 to 1020: line printer subroutine.

```

1 ' TRS-80 Mod.III 50/75 Baud RTTY Receiving Program
2 ' Alec Lieber LU1FCR 3/2/84
3 CLS: CLEAR1000: DEFINT A-Z: DIM A$(1,31): R=16872
4 POKE16889,8
5 POKE16890,1
6 POKE16526,90: POKE16527,0: Z=USR(0)
7 POKE16526,80
9 OUT233,0
10 DATA "E", "A", "S,I,U,,D,R,J,N,F,C,K,T,Z,L,W,H,Y,P,Q,O,B,G,,M,X,V,
11 DATA "3", "-", "8,7,,,4,8", "$", "(", "S,+,),2,8,6,0,1,9,?,;,,,/,=,
20 FOR X=0 TO 1: FOR B=0 TO 31
30 READ A$(X,B)
40 NEXT: NEXT
42 A$(1,17)=CHR$(34)
90 X=0: CLS
100 Z=USR(0): B=PEEK(R)
120 IF B=31 X=0
130 IF B=27 X=1
134 IF P=1 GOSUB1000
190 IF B=2 PRINT CHR$(10);: GOTO100
200 PRINT A$(X,B);
300 W$=INKEY$: IF W$="" GOTO100
310 IF W$="S" P=0: P$=""
312 IF W$="P" P=1
320 IF W$="6" GOTO90
325 IF W$="3" CLS: PRINT CHR$(23);
344 IF W$=CHR$(10) OUT233,0
346 IF W$=CHR$(91) OUT233,17
350 IF W$="L" X=0
400 GOTO100
1000 P$=RIGHT$(P$,72)+A$(X,B)
1010 IF B=2 LPRINT P$: P$=""
1020 RETURN

```

**WANT ADS CONTINUED**

FROM THE ESTATE OF K7BV, 'Mac' McGinley; T4XC \$170, AC4 PS \$80, R4C \$185, (\$415 for the above) Opto elect. FC50 60 MHZ counter \$45, UT4 \$45, ST6 \$55. All items have manuals and were working at the time of Mac's death. Items will be sold FOB UPS as is and for the above prices/best best offer. WB4JQQ Wally for info. 303-887-2293.

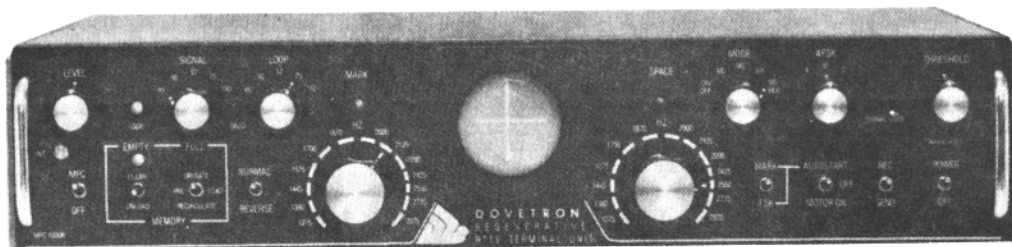
TELETYPE EQUIPMENT, parts, gears, supplies. Expanded list now available. Some lower prices. SASE for list. Will be at Dayton. Order now and pick up at Dayton to save shipping. P. Andersen, 37249 Hebel Rd., Richmond, MI 48062. 313-727-1964.

NEWS-NEWS-NEWS Amateur Radio's Newspaper "WORLD RADIO". Year subscription is \$9.00. Send to WORLD RADIO, 2509 F. Donner Way, Sacramento, CA 95818. HAM RADIO MAGAZINE. The no nonsense state-of-the-art technical magazine. Subscribe now and see for yourself. 1 year \$19.50 in USA. Canada and foreign surface \$21.50. Europe, Africa & Japan \$28.00. Ham Publishing Group, Greenville, NH 03048.

Thanks to Alejandro for the above program. Now OM's and YL's how about some programs for the rest of the computers that we use on RTTY? Also, how about some articles on software, hardware and some comparisons between the various makes/producers of the above?? de Dee, N6ELP...Thanks for your help.....

# MPC-1000R BY DOVETRON

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