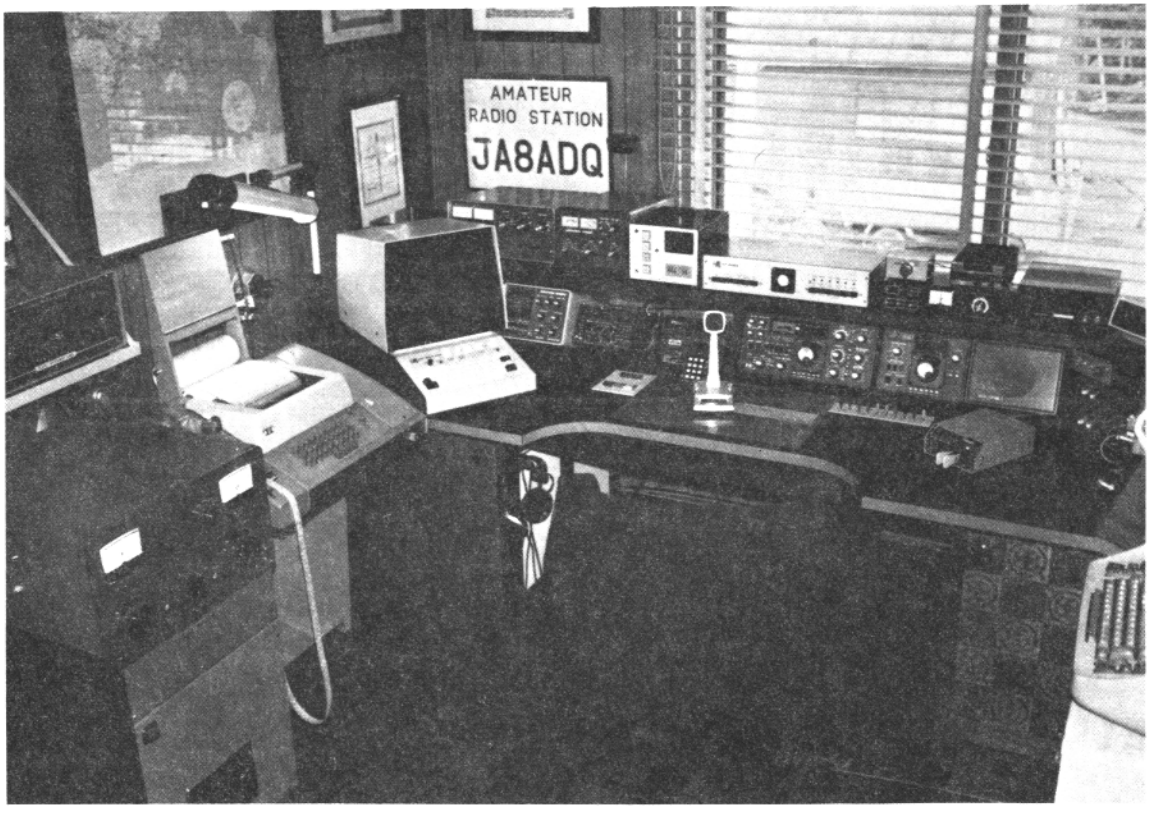
RTTY Journal

JANUARY, 1983

VOLUME 31 NO. 1 EXCLUSIVELY AMATEUR RADIOTELETYPE ONE DOLLAR



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RTTY JOURNAL

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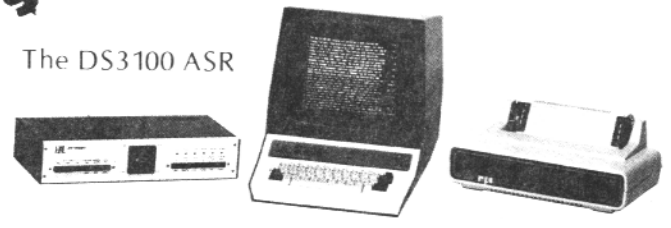

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Thirty years of RTTY operations, started during December, 1952. Which makes for an anniversary, note, it was reported in the December 1952 edition of the RTTY JOURNAL, published in January 1953. Thirty years does not seem very long considering other things which have happened. Behind the publication of the RTTY JOURNAL, was Herbert Hoover, Jr., President of United Geophysical Corporation, in Pasadena, California. The writer was employed as research supervisor for its' research labs, and as such had available to him, commercial draftsmen, a lab, along with other items which are necessary to a successful endeavor. Also. Mr. Hoover had arranged for the release of some 10 to 15 model 12 Teletypes which were surplus, to Southern California Edison Company. So with a source of Teletypes, and a need for circuits etc., to make them operative, United Geophysical was brought into service. Mr. Hoover has said on many occasions, a good means of exchanging information was thru a small RTTY paper, published on a regular basis. Hence RTTY was started, and has continued thru the years between. The writers job included a bit of traveling at times, which helped to get the word around regarding Teletype and its various requirements. A meeting was held at one of our members homes, Leo Shepard, W6LS, at which the planning for RTTY as a magazine was made. Another member was Bert Ayers, W6CL, who operated a commercial print shop, complete with a typesetting lino-type to set type for the RTTY Magazine. Along with the printer, we had amongst our members several electrical engineers, such as Ted Swift, W6CQM, to write articles, such as his " FSK The Easy Way", which appeared in an early issue. Other items such as the "tape off the floor" and similar items were carried.

During some of the trips out of town, I was able to set up various RTTY meetings across the country, such as the ones in New York City, Boston, Chicago and Dallas as well.

As with other items/things, changes are taking place in our RTTY operations such as the use of computers and their attendant problems. A A side note on my personnel operations at United, I was transferred to the controllers department in the middle sixties, which brought a series of problems to my attention, such as "Cobol" and similar languages. I was given the job of changing our records from "Hand Labor" to computer operations. This started out using a Control Data Corporation CDC 1300 and later an IBM smaller sized computer. However, in the end we purchased an IBM 360-80. Along the way, many hours were spent at CDCDS school too! Programming is a detailed job, and has to be right or "garbage in and garbage out" is all too familiar. So with the work done at United it is not at all impossible to forsee the trends in RTTY operations.

All my best to the RTTY JOURNAL and its' staff, for continued success. 73 - Merrill L. Swan, W6AEE/AAT9BH.

Merrill Swan was editor and published from its inception until 1966 when Dusty Dunn, W8CQ of Royal Oaks, Michigan took over its publication. From then until 1977 Dusty handled the chore of the JOURNAL. We hope to have an article from Dusty in next months issue. 73 de N6ELP.

at a recent party at the home of Jake, K5WTA and Chris, WB5TWK in San Diego. John, KA6NYK; Audrey XYZ of WB6CYX; Donna, N6CVK; Gale, WB6CYX; Harmonic of WB6WBH; Dee, N6ELP; Jake K5WTA; Chris, WB5TWK; Bill, WB6WBH; Tom, WD6BBW; Taka JA1JDD (visiting in San Diego);and Glenn, WB7SPD. All had a good time.

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HITS & MISSES by GEORGE

GEORGE HAMMON, WA6CQW
14215 Pecan Park Lane Space 73
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30 Meters

The FCC authorized Amateur operation on 10 MHz. The commission on October 28, 1982 authorized CW and RTTY operation only. A 250 watt input level was also authorized. The most important restriction needs to be pointed out. The 10.109 to 10.115 MHz portion is forbidden use by the United States Government.

The temporary Amateur allocation is on a secondary basis. The FCC makes this point very clear as they have started to issue pink citation slips. The RTTY gang must realize this amendment is effective only until official action by the United States and the commission regarding the final acts of WARC-79. This will determine the final configuration of the 30 meter band.

The FCC issued a public notice on November 8, 1982. "The commission wished to remind Amateur radio operators who now use recently authorized frequencies in the 10.100 to 10.109 and 10.115 to 10.150 band. They must stay off frequencies 10.109 to avoid interfering with government operations."

This 6 KHz restriction must be observed. The same public notice also issued a very ominous warning. "Amateur radio operators in the United States would be ill advised at this time to invest heavily in equipment which can be used only for this frequency Band." A word to the wise as I see it.

COLUMBIA

Astronaut Owen Garriot, W5LFL will fly the space shuttle Columbia on its ninth mission. NASA Houston has agreed to allow Owen to take a specially reworked two meter handheld along. A ground plane antenna will be installed in the cargo bay. This operation will last for seven days. Washington approval is still pending for this October 1983 operation. I sure wish we could talk Owen into putting a RTTY interface baord in their computer.

1982

I realize that it's not a good thing to dwell on the past but one little peak back sure couldn't hurt. The year 1982 was a real paradox. It was exciting, quick, contradictory and full of changes. I turned 50 so why not add reflective or better still depressed.

The year 1982 brought recognition to RTTY in many ways. CQ magazine devoted almost an entire issue to RTTY. The information explosion and in particular, the use of computers on RTTY bring home the point that we are now a viable and exciting part of the Amateur Radio Hobby.

1982 had its emergency situations and RTTY played a major role. The major mover of mass traffic is a role well suited for RTTY.

1982 brought many changes. The 30 meter band was opened. The endless city and township restrictions against Amateur Radio. The countless legal battles to keep hands off Amateur Radio. The cable TV suits. A constant struggle to enjoy our hobby in peace.

1982 brought many proposed changes. The no code proposal is one where so many words have been written, so much bitter controversy. I personally feel it will come to pass. I don't like the proposal, I think it is not in the best interests of Amateur Radio but the people whose main interest is money will have their way.Amateurs lost the 11 meter band and we will see the no code license. Big money has a relentless way of getting what they want. The ARRL is to be commended for their stand. I feel, in the end they will get the message and will try to make the best of an un=-eviable situation. I very sincerely hope the wishes of the majority of the Amateur Radio fraternity will be listened to.

1982 brought the volunteer examination proposal. This one also looks to be just around the corner. Lets look at a few key points of this proposal:

FCC approved pool of at least 500 questions per license class.

Exams changed monthly and more than one version of a particular exam issued each month.

The FCC will release all question banks into public domain.

Applicants will be required to take a sending test.

The receiving test will be some version of a fill in or solid copy format.

I strongly favor this proposal. The average Ham must either take a day off from work or school to take an exam. Many must wait months or drive many miles to an examination point. The volunteer program is a solid proposal and I hope it is enacted.

The year 1982 was a year I visited many clubs in the area. I was able to get to a few conventions and discuss RTTY. The year 1982 is over and we must look to the New Year with hope and peace for all countries. The holidays are over but let's let that spirit continue thru the New Year.

So long for now, WA6CQW

Use our classified for all your wants and to get rid of your don't wants...

THE POSTMAN IS CALLING

S. Dick Uhrmacher, KØVKH
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Has the mail box had a little dust in the bottom of it recently? Have your friends forgotten how to write? Are you tired of all of the "junk" mail you've been receiving? Well, maybe it's just because you haven't been checking the RIGHT mail box!

This article is designed to acquaint you with the new Message Storage Operation, more affectionately known as "the MSO", or Electronic Mail Box, and to give you some hints on proper ways to exploit the system, where to find them, and a bit about on-frequency ethics. I hope to present the most important facts about the MSO, but since it is a wide ranging subject, I'm sure that I will miss something, and I take this opportunity to invite you to not only experiment with the various MSO's to answer your questions, but to correspond with me at the above address, should you feel it necessary.

The Message Storage Operation is an adjunct to the ever popular "HAL' DS-3100 Automatic Send-Receive Terminal, manufactured by the HAL Communications Corporation in Urbana, Illinois. For those of you who presently own a DS-3100, without the MSO, it can be added to your unit with minimum trouble and expense. The MSO is a completely solid-state device, which adds mass storage to the DS-3100, which can be accessed either locally, or by remote users. It has a 32,768 byte capacity, (approximately 450 lines of message storage or retrieval), which has shown to be more than adequate storage. Control of the MSO can be accomplished by the local or remote user, by simply typing a series of commands recognizable by the MSO. Files (messages) can be written to, read from, or deleted from the system by use of these commands, and a "help" command is provided to assist in using the system. At this point I would like to point out that the system is fully automatic, written with "fail safe" features in mind, and cannot be harmed in any way by either the local or remote user. Everyone is a novice when they first use any sophisticated system, and the MSO is not only forgiving, but will tell you quickly if you make any mistakes.

First and foremost concerning the use of the MSO's, is a basic understanding of our frequency usage. NO FREQUENCY is reserved, set aside, allocated, or otherwise designated for ONLY MSO usage! It is important to observe some very basic rules and precautions BEFORE you activate one of the MSO's in order to prevent QRM to other users of the frequency, whether they be other MSO users, or an already established QSO on or near the frequency. Just as with any other frequency or mode you use, please L-I-S-T-E-N on the frequency before you activate one of the systems. Propagation conditions vary from hour-to-hour, and it is important to listen for a few minutes to keep from stepping on someone else who may be in QSO, or using one of the MSO's. Your cooperation in this one area alone will do more for smooth operation of the MSO's, than all of the other areas combined!

Just where do you find these mysterious electronic MSO's? Both 20 and 40 meters have well established MSO operations. The frequencies of 14 085 625 Hertz, and 7 096 500 Hertz are popular with many stations, and other smaller operations are appearing daily. I'm told that there is at least one MSO operating on 80 meters, (in the Western part of the United States), although I'm unaware of it's frequency. Those who maintain MSO systems on the various bands almost without exception, use some form or crystal control for their transmitters/receivers.

Consequently, you can count on these MSO's appearing at the same spot on your dial in day-to-day operations. And, this brings up our next most important subject, relative to good frequency usuage. It is very important that the tones eminating from YOUR equipment, match as closely as possible the tones output from the MSO. In this regard, tradition states that it is the "MARK" frequency with which we measure RTTY frequencies. For instance, in order to successfully activate and use the MSO systems on 20 meters, your "MARK" tone (which is 2125 Hertz lower than your operating or carrier frequency), must land on 14 085 625 Hertz. Your digital readout may read 14 087.7 or some other reading, but it is the "MARK" tone frequency that is important to match with the MSO. Off-frequency operation causes many difficulties, some of which are unsuccessful activation and de-activation of the MSO, QRM from "fishing expeditions" while trying to find the frequency, unsuccessful .WRITE, .READ and .DELETE commands, and a general lack of smooth operation of the MSO. Modern demodulators have SHARP front-end filters, and as such, require a very close match to successfully demodulate RTTY signals!

Now that we are sure that the frequency is clear, and that we have our transmitting/receiving equipment on the correct frequency, let's talk a bit about some "Golden rules" for MSO usage.

1. Anonymity is great, but the F.C.C. REQUIRES that you properly identify your station! So, please properly identify your station when utilizing the MSO's.
2. Always start your transmissions to the MSO's with a short "Mark hold" of 2 to 3 seconds, followed by at least one carriage return/line feed (CR/LF). This stabilizes both your equipment and that of the MSO.
3. Each command to the MSO must be preceeded by a "period", (.WRITE, .READ, .DELETE, etc.), and the command must be "left justified", Positioned on the extreme left margin.) Commands sent to the MSO from other than the left margin, or without the "period", are ignored. The only exception to this is the Access Code, and the four N's (NNNN, without a space between the N's), which may be sent from any position in the print line.
4. Limit your messages to that information necessary to get the message across. In ALL cases, limit your message to LESS THAN 10 (ten) minutes in length, in order to comply with F.C.C. ID requirements.
5. Please utilize the ".DELETE" command to remove messages directed to you from the MSO, after you have ".READ" them. Continued on page 12...

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The ultimate in communications versatility, the **Drake Theta 9000E** provides complete transceive capability of CW (Morse Code), RTTY (Baudot), and ASCII. A full computer RS232 interface, cassette tape storage port, selective calling feature with answer-back, light pen graphics, printer interface and word processing software are all standard.

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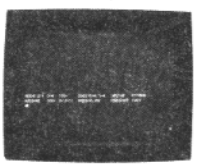

You won't buy any other communications terminal once you have studied all the advanced operating convenience built into the **Drake Theta 9000E**. It's complete.

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The **Drake Theta 550** is a compact receive-only communications terminal and is designed to demodulate and display the three most popular over-the-air modes of data communications: CW (Morse Code), RTTY (Baudot), and ASCII. Any standard TV monitor can be used.

A full-featured microprocessor controlled unit, the Drake Theta 550 has selective calling, battery backed-up memory, audio monitor, and informative L.E.D. tuning indicators. There is also interfacing to permit the addition of a dot matrix printer for "hard" copy and a keyer paddle input to permit CW transmission with full iambic operation.

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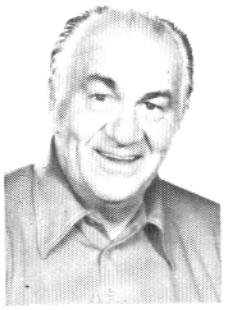
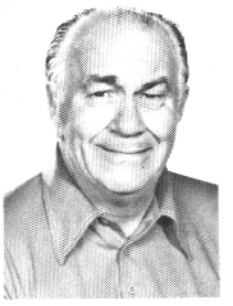


DX RTTY

BY BILL



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It is a lot of fun watching the print on the CRT to see how many new RTTY ops are enjoying the thrill of the DX chase. As computers come down in price, and go up in utility, more and more Hams are "discovering" RTTY. And that is good. We have a great sub-section of a fine hobby, and.. as I complete my 50th year as a licensed Ham, I am very pleased to see so many newcomers feeling the same thrills that I had so many years ago.

However, with the growing number of RTTY operators, I believe it is time we put together a plan for band utilization, and I am not alone in my thinking. My mail and phone calls from interested Hams say the same thing. I have said this before, if every Ham wanting to have his own mailbox operation picks his own frequency, we will soon have no room for rag chewing and Dxing. We much share these frequencies and operate with a spirit of co-operation, this includes mailboxes. So far, most of the MSO group have been on twenty meters, but now we notice them spreading to ten and fifteen meters.

I'm not against mailboxes; in fact, I have been known to use one now and then. They have a place in our hobby spectrum to be sure. I am not going to argue the legality of the operations they perform, although I do have my doubts about some of them. Are they legal for DX third-party traffic? For example:Can a ZS station leave a message in a US mailbox??? for another Ham in the USA, when there is no third-party agreement with South Africa? I don't know the answer, do you?

It would certainly be better if all the mailbox operations would cluster in one area of each band, leaving the rest of the spectrum to person-to-person communications. The thing about MSO operations that bugs me (and others) is the unnecessary QRM they cause. The novelty of working an unmanned station seems to draw the kerchunkers (from two meter repeater jargon) who like to impress their friends by punching up the directories on every station in the band.

Then there are those who use the automated station to check if a band is open or not. And finally, those checking to see if there is anything in the box for them. And so, many minutes of extraneous and useless transmissions clutter up the bands.

What we need is a central clearing house to allocate the MSO frequencies similar to the two-meter repeater operation. But we are not organized for such an operation, and the ARRL seems to think of RTTY as an orphan cousin. So the MSO's keep popping on and staking out their own little niche in the bands. The fact that they are crystal-controlled seems to mean they own the frequency. I cannot recall once hearing anyone ever ask if a MSO frequency is busy. The users just turn on and call up the station directory, even if the automatic station owner puts a warning to "listen" in the instruction list.

There is nothing like having a DX QSO ruined by a kerchunker. Sometimes it seems as if they feel that they own the QRG lock, stock and barrel. Well, this is not my idea of how the Ham bands should be used.

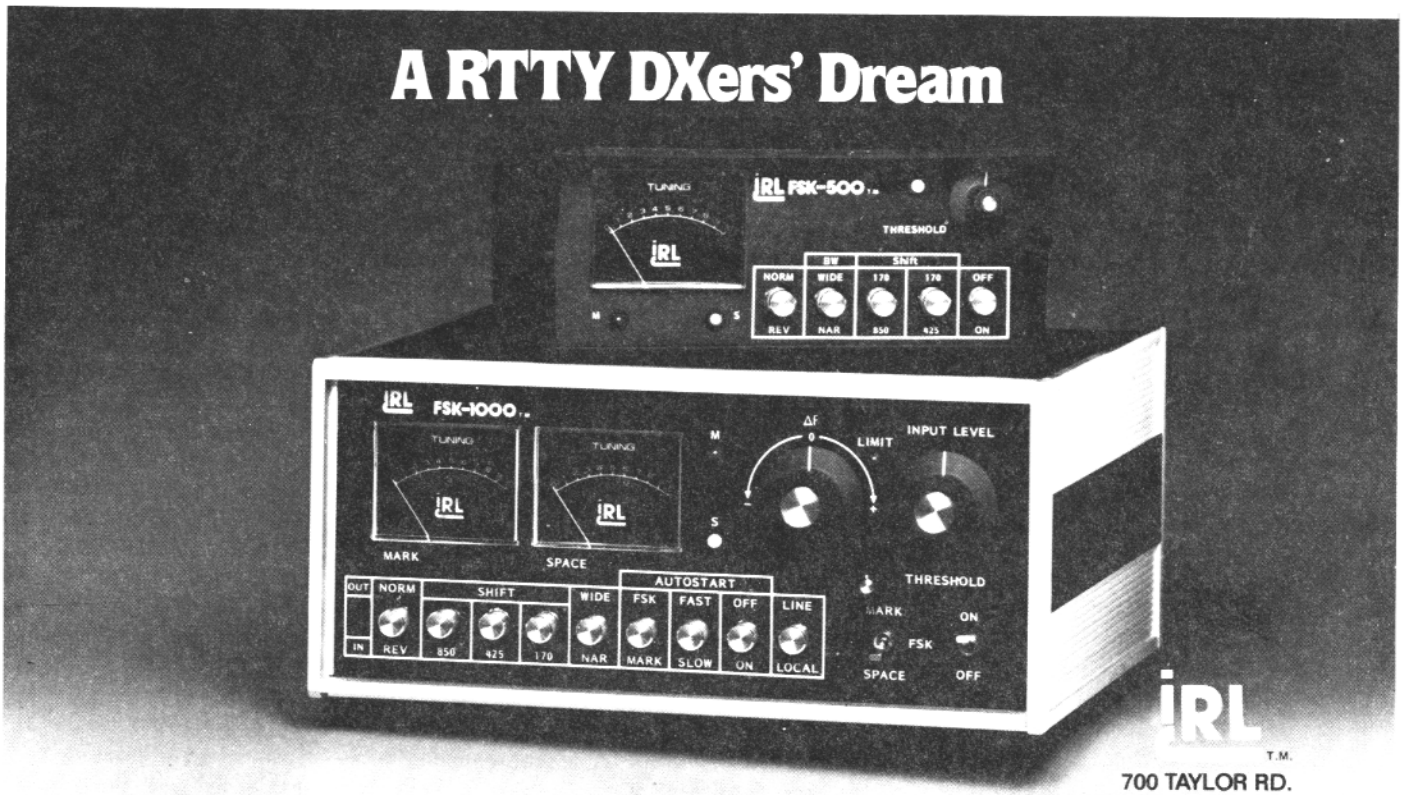
Perhaps the JOURNAL should start a department where the command list for the various MSO stations could be printed. Then the owners could eliminate the command listings being broadcast time and time again for inquisitive kerchunkers.

When we get fifty times the number of RTTY ops now on the bands, it will be a colossal mess, so now is the time to plan ahead instead of trying to fix it later. I would like your pro or con comments on this.

Recently, I sent 102 DXCC QSL cards to the ARRL and have now received notification that the award has been granted. There are many Hams who have not done this. The biggest reason, I've been told, is many believe that the ARRL doesn't care about RTTY. This is probably because the League does not give endorsements for either RTTY and 160 meter DXCC, they only give the basic award. Well, I had a short discussion with the DXCC advisory councilman from my division, and also mentioned it to the President of the League. I guess the subject has not come up often, according to those people.. W5HEZ, who holds the award from ARRL, tells me Don Search, who heads the DXCC program for the League, said no one had really asked for endorsements, so it has never been implemented. If it were to be started, everyone would have to send in their cards again, as the Leaque does not keep records on RTTY. Any comments on this?

Band conditions have really been very good or very poor. During a good spell Klaus, ZS3L, in Namibia reappeared on RTTY. Klaus told Mac, K7BV, that two more Namibia stations are on RTTY now. Their calls are ZS3HL and ZS3GB. The later has a new antenna and linear and is ready to go. Remember that ZS3 counts as a separate country from South Africa and should not be confused with the other ZS stations. In his contact with Mac, Klaus said he had been absent from the mode for about six months and can be QSL'd via DJ4LK.

A RTTY DXers' Dream



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FSK 500
TERMINAL UNIT

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- RS232 or TTL
- Full one year warranty
- Optional loop supply

Both the FSK-1000 and FSK-500 are easily interfaced to your APPLE, TRS and HEATH computer.
Call for further details.

DX COLUMN CONTINUED

If you are listening on Sundays at 0130Z, tune in the DX broadcast from VK2TTY, the Australian Teleprinter Club station in Sidney. The frequency is 21094 and the broadcasts last about 20 minutes. Syd, VK2SG, usually stands by for calls after the QST broadcast. The casts usually have a lot of pertinent DX information from all over the world.

Now that we have the new 30 meter band in operation, it has been recommended that all RTTY operations be confined to the 10140-10150 area. A good CW friend of mine picked out a nice clear spot in the center of the 30 meter band and lashed out a snappy CQ. A VE station answered and advised him he was transmitting right in the no-no window in the band and should QRT immediately. Just as my friend turned off the rig, the phone rang, it was the FCC with a stern warning. And the payoff is this: my friend used to work in a FCC monitoring station. He told the caller that fact, but it didn't cut any ice!

CN8AT is operating quite regularly on twenty about 1900 hours. The ARRL rejected his card for my DXCC because he forgot to put my callsign on it, and I didn't notice it missing. Luckily I had sent along two extras.

HK1KU, Dick, is on from Columbia. He can be QSL'd at Box 244, Barranquilla. I had the pleasure of being his first RTTY contact.

YC3BHU, Peter, is active on fifteen with only 30 watts. Look for him around 0000Z from Surabaya.

It is time for another Honor Roll of RTTY DXers. It is scheduled for the March issue so please send in your totals of worked/confirmed to me by the first of February. Because we have not heard from many of you with updates during the last year, we will probably publish only the current input. We have a number of Hams over the 200 mark now, but we want input from everyone. While you are at it, send along information for this column. It is your forum and I welcome your letters.

QSL DEPARTMENT. The long awaited cards from VP2EDX have been mailed and now that the South Pole has mail service again, KC4AAA cards are beginning to appear in mailboxes (non-RTTY kind).

JA1ACB, Gin, reports working HSO-SEA with VS6CT at the keys. Gin also says only two other JA stations and eight Europeans were lucky enough to work the rare station. Other DX information supplied by Gin: ST2SA is on around 1700 to 2200, and ZB2HL(G4-CTG) is sometimes active around 1200 to 1500 on 20. (See information further down the column). Gin further informs us that HS1AMN now has a tono RTTY outfit and should be appearing on the air.

EAVESDROPPING: "It was alphabet soup again, Harry!"..."Now your signal is in tall cotton, RST 599"..."Got rid of the old klunker, so now it's like having a chunk of history sitting here beside me"..."Sorry, but I'm not god at typing"..."I think I will QRT and watch the news from Gibraltar, here it's in Arabic"..."Sorry I couldn't work the HH2MC I heard today, that would have been my first DX QSO on RTTY"..."I told the XYL that the doctor recommended I stay inside, out of the sun, and work the rig all day, but she didn't believe me"..."Got an old model 15 in the garage, I'm too sentimental to toss it out"..."Your signal is horseradish strong"..."I used to be rich before I became a Ham"..."Been on RTTY one year and worked 700 US stations and 650 DX"..."I am using the Columbus method of typing search and land"..."How about the MSO that spent the afternoon on line feed!"..."I will QSL if your name is in the cool book"..."How come a country that can develop such a modern miracle as striped tooth paste can't put unemployed people back to work?"

How many times have you tuned across a band, decided it was dead, and then flipped to another? Well, Mac, K7BV (207/205) says you should not do that, you should test the waters, so to speak. Mac tells that many times he has called CQ on a dead band and had answers from DX stations. Normally the 15 meter band is dead in the middle of the night at my QTH. At 4AM, the morning after I discussed the dead band theory with Mac, I tuned across the 20 band. There were a few stations, nothing very strong. I checked 10, it was dead; so I punched up 15 and, lo and behold, there were good signals. I worked OZ1HRO who told me I was the only stateside station coming through. When I finished with him Arthur, ON4-BX, came booming in for a nice QSO. I also heard PAØLUS, IK5AAX and a bunch of others. Because I was sleepy I went back to bed. The moral of the story is this: Don't assume the band is dead, check it out!

By the time this issue is out JI1-VLV should be operating as 9N1LV from Nepal. Nana, I believe is only 19 years old and a YL college student will be the only operator. The preliminary plans called for two other JA operators to go along, but this was changed in December. Recently many DXpedition announced plans have been changed at the last minute, so we hope we will be able to work Nana from Nepal.

For those chasing W.A.S. please note another Delaware station, Bernie is now on RTTY.

Had a nice QSO with Leo, 3A2LJ/SM/-MM, while he was sailing across the Carribean on the way to California through the Panama Canal. He is on a 95' motor yacht named the Rampager. Leo is forced to use 50 baud RTTY (66WPM) as he is using the commercial gear installed on the vessel. QSL via 3A2ARM, Principality of Monaco. Leo also indicates that 3A2EE and one other station are operating RTTY from Monaco now.

One of the nicest discoveries of the last month is the beacon group of stations which are operating on 14100MHz. The DX bulletin and World Radio broke the news almost simultaneously. Listen beginning at exactly :00, :10, :20 etc. after each hour. Each station (there will be nine in all, spread all over the world) transmits for about 53 seconds as follows: QST DE 4U1UN/B BEACON." This is followed by a nine second dash at 100 watts output, another nine second dash at 10 watts, a third at one watt and the last is at .1 watt. The station then sends:"SK DE 4U1UN/B. Beginning at the start of the next minute the second station does the same thing and so on through all stations

NEW UNIVERSAL M-600
MULTI-MODE, CRYPTO-DECODER

UNIVERSAL M-600 RTTY CODE RECEIVER

THE ONLY RTTY UNIT THAT DECODES —

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PLUS — All speeds of BAUDOT, ASCII and MORSE (CW). M-300 keyboard plug-in for transmit. BAUDOT, ASCII, CW.

★ AMTOR when approved.

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BIT INVERSION-5 level security bit inversion for baudot decoding from key pad. Decodes any combination of bit inversion being used for security.

TOR-SITOR-Both ARQ and FEC modes with full receive only function on these codes. Amtor when approved.

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BAUDOT—60, 66, 75, 100 and 132 WPM

MORSE-CW-AUTO-RANGE up to 60 WPM

SPEED READOUT-ASCII and BAUDOT

MULTIPLE SCROLL INHIBIT

UN-SHIFT ON SPACE

SELF-TEST SYSTEM-Allows check out of M-600 operation.

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PRINTER DRIVER-Isolated loop, Mil-188 or RS232 and optional parallel ASCII. All with handshaking available. Baud rates of 45, 50, 57, and 74 in baudot and 110, 150, and 300 in ASCII. The M-600 will drive almost any printer available at any of the input modes.

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PRICE $799.95
Shipping Extra
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that are operating. The stations rotate from east to west. The first is the UN station, then California, Hawaii, etc. This goes on 24 hours a day. When the bands are open wide, it is surprising how you can hear that .1 watt. It is a great propagation checker, and it's there every ten minutes. When all nine are operating it will be nearly continuous.

Taka, JA1JDD, reports getting a QSL card answer 9X5SP in only ten days. This made Taka's score 150/135. Taka said simply,"Well, it is an unbelievably quick response from the mail system!" We.., Taka, that is not the US mail system! It took 3 weeks and one day for a priority package to go from my QTH to Denver (600 miles).

Kenya stations are back to the letter Z after sporting the letter Y as a commemorative callsign for a month.

Had a nice QSO with Enno, XT2AU, on 21090 at about 1700Z. He is quite active from Ouagadougou, Upper Volta. If you say that town's name fast it sounds lke a Model T auto horn.

Jean, F8XT (184/182), had a QSL bonanza when the mailman delivered a card from CO2FRC, UR2FU, JY9RA and, after a wait of around 2 years, OE1-EHB/YK. Jean recently worked A22BW on 14093 at 1810Z. QSL is via DK3KD. JY9RA in Jordan was worked at 0720Z on 20. Jean also reports hearing the Z21CE MSO operating.

Ken, W2PSU (148/140), also reported getting his card from OE1EHB/YK after a very long wait. Ken also is happy with 2 new ones:DJ6QT/CT3, via DJ6QT, and VP9GE, Ken Kelly, Box 1555, Hamilton 5, Bermuda.

Bud, W2LFl (183/182), has been working 30 meters. He reports 17 countries and 4 continents, but on CW, not RTTY. His RTTY contacts on 30 include F6FLT, WØHFX and K4QX ex-5NØDOG. Bud also mentions that ZB2HL has left Gibralter, and is not sure if he will return again.

Chuck , W6JOX, tells us he was ZS6-ADY's first RTTY contact. Nice to see more South African stations on the air. I recall being entertained by the Capetown Ham club when I visited there back in 1947. It was a great weekend.

I recently mentioned that WA8SME was now operating RTTY from G5EPV. Well, I accidentally sent my QSL card intended for HK3NBG, to Mark. He returned it to me, with a note that he heard me over there in Jolly old England. Mark's address is POB 2729 APO New York 09238. I now know it is the correct address.

John, W3KV (209/208), was monitoring a 21MHz QSO between F8XT and myself when I asked Jean if he had worked DJ6QT/CT3 on 10 meters that day? John immediately changed from 15 to 10, and without touching the dial, found the Madiera Island station calling CQ. John then renewed his acquaintance with Walter who is quite a globe trotter. W3KV has worked him from C5, 3S8 and 3B9.

K1LPS, Larry (107/93) is closing in on DXCC. He reports GW2DUT on 20 at 1100Z. He also indicates that HC1-JX can be QSL'd via K5SW. In commenting on a DX station using a MSO for automatic contacts, Larry says,"That will be the day...when I talk to a robot for a new country..Hi!" He reports this string of stations:LX1PH, ZS6BWO, EA6IC, XT2AU, FK8BK, GM0KSK and GW2HJC.

Doc, W7MI (124/112), recalls working VQ3HGE, Tanganyika back in 1947-48 and asks if that could have been me. Yes, it might have been Doc, or it could have been Bob, W7LR. He and I were the two Hams on the African expedition sponsored by Hallicrafter.

Doc also sends along this information: Dave, the RTTY operator at HZ1-AB, is actually W7KJJ from Portland, Oregon. Dave has informed Doc that they are temporarily QRX waiting some new HAL gear. Those contacts in the CARTG from HZ were with a TRS-80. Look for Dave in January from Saudi Arabia. QSL via K8PYD.

OK1JKM, Milos, reports a new total of 154/130 after working 5R8AL in Malagasy. The QSL cards from Alain are sponsored by the International DX Foundation. The IDXF also sponsors DXpeditions to exotic locations. All serious DXers should support this operation. I think if we can get some of the manufacturers to make RTTY gear available, the IDXF would be happy to add RTTY to their bag of tricks.

I8AA, Ros, is approaching the magic 200 number. He stands now at 199. ON4BX, Arthur, is now at 219/214 and right behind is ON4CK with 214/209. If it is hard to find new ones at 120 worked, it must be terrible at 219!

AWARDS

W2LFL, Harold (Bud) Smith
180 endorsement 2, November 1982.

W3KV, John Possehl
200 endorsement 3 November 1982.

DXCC #74
W8JMG Raymond Owen
22 November, 1982

In the future, all applications for RTTY JOURNAL Awards should be addressed to the office listed on the inside cover of the JOURNAL. The RTTY JOURNAL awards RTTY DXCC, RTTY WAS and RTTY WAC. Also please address all contest information rules and results to the JOURNAL office.

Thanks to all those mentioned above and JF3JIQ, W8GIN and all those I printed out of curiosity.

73 and dit dit Bill WØLHS

HAM HELPS

Jerry Stillman writes and asks if he bought one of those Tineep (or Timex?) computers what else do I need to see the message on my TV set from my short wave radio? Jerry is at 128 Highland Ave., Salem, MA 01970.

More and more Hams are writing to find out where to get information on getting into RTTY with their computers. The Apple, TRS-80 and Heath products we can direct interested Hams to immediately. Some of the others like the VIC-20 for one we have little or no information on. How about you..what kind of computer do you have and where did you get the program, interface etc. for your particular computer? We will start files on all computers here and when needed go to them for information to pass along to others. Can you all help us with this project? Even TRS-80, Apple and Heath computer buffs should send inputs. All contributions will be gratefully accepted. Send to The RTTY JOURNAL office, POB RY, Cardiff-by-the-Sea, CA 92007. Thanks.

VHF COLUMN by JOHN

JOHN CUNNINGHAM, WA9WJG
POST OFFICE BOX RY
PERRYSVILLE. IN 47974

The RTTY activity is sure picking up here as the wx gets worse. The condx outside make the green keys look like a gud way to pass an evening.

Well the little fat man in the red suit made it in and out without knocking down any antennas. He did not bring the CWR-6850 here, he left a sled, that is a snowmobile. I guess the CWR-6850 will come later. Wonder if anyone has ever had a snow mobile RTTY mobile. That may be a bit difficult, ever try typing with your mittens on?

The status of the Champaign-Urbana, Illinois repeater has not changed much.yet. The radio is being aligned and the RTTY equipment added by Al, WB9OIH.

The RTTY experiment on the Terre Haute, Indiana voice repeater just didn't work out too well. Timer problems, another repeater on frequency etc. The group is back on 146.400 simplex and still active.

I have been hearing some VIC-20's on the air. The price of this little computer has made it quite popular with the Hams around here. Has anyone got any info on a homemade RTTY interface for the Vic? How about some software? (Please send info on this and any other computer to the JOURNAL office to help others looking for a way to get on RTTY).

Thanks to the British Amateur Radio Teleprinter Group for the following announcement:
B.A.R.T.G. will sponsor a spring VHF/UHF RTTY contest. The contest will be on 3 bands:144, 432 and 1296 MHz. Operators within zones 14 and 15 who are permitted to use RTTY are welcomed. Scoring will be based on the distance covered by each contact. Contest date is 9th and 10th of April 1983. Sure sounds like a good contest. I'm tempted to load the gear on the pontoon boat and head out across "the big pond". Hi Hi.

For forms, logs and more information on the B.A.R.T.G. spring VHF/UHF RTTY contest contact G8APB or G8CDW. (Tell 'em John sent you.)

If anyone has an answer back circuit which can be used on machine based (60 mil loop) system, I would like to hear about it. The idea is to leave the answer back on night and day, I don't like to leave the computer on like that. If you can send me a circuit like this I will report it here in the VHF column. This could help stir up some activity among the locals by having a method of leaving a message for another station and knowing that he got it. I know this is not a new idea by any means. It has been around for years, W.U. even had a mechanical answer back of some kind, so I hear. Being an industrial mechanic I would like to see one of those, maybe even put 'er on the ol' 28.

What are you doing to help others get on RTTY? What new equipment have you added to the station? What are the local RTTY'ers in your area doing? I would like to report it here in the VHF news, let me hear from you.

73 and CUL on the "green keys", John WA9WJG.

The Argonne Amateur Radio Club net meets every Monday at 2100 local on W9QVE/R. This club must have a good percentage of RTTY operators as their newletter, sent to us by Bill, W9AVE had a great art picture of chess pieces "King and Queen" originated by Sandi, WB4VEJ. Bill also informs us that the clubs recent special event day was quite successful. They were surprised at the over the air RTTY response of over 150 requests for their RTTY certificates. (We were not surprised at the turnout. We know the RTTYers are out there .)
de Dee, N6ELP....

THE POSTMAN IS CALLING CONTINUED

6. Please use the ".SDIR", (short-form directory), in lieu of the "dir" (long-form directory), unless you need the information in the long-form directory. 7. Be sure to use the 7. Be sure to use the ".Exit" command to deactivate the MSO when you are through. Failure to shut down one MSO means it may respond to commands directed to another MSO on the frequency, and this does cause a bit of confusion!

As stated earlier, the MSO system does contain a ".Help" command to refresh your memory on the various commands available, and a ".Filehelp" command to help in constructing files and passwords. Please note that there is a mandatory "space character" between the ".Write" command, and the filename, and mandatory carriage return/line feed immediately after the filename. (A carriage return/line feed after EACH command to the MSO is highly recommended!) The file name can be ANY combination of letters and numbers that the receiving station will recognize. Typically the filename is something like this: WRITE KØVKH DE K4KOZ (CR/LF)- This immediately tells KØVKH that he has a message waiting for him in the MSO, and that it is from K4KOZ. The MSO will NOT accept duplicate filenames, so if it is necessary to .Write a second message to the same station, (while the first one is still on file in the MSO), then make the second filename distinctive by adding a number, letter, etc. For instance: .Write KØVKH2 DE K4KOZ (CR/LF).

Since filenames are very distinctive, it is additionally important to send the EXACT information to the MSO when using the .READ or .DELETE commands, even if it is mis-spelled in the Directory. Anything other than the correct filename, and the system will return the "File not found"

To conclude, the MSO's are providing a good service on RTTY, CW and ASCII on VHF and UHF. MSO owners derive pleasure in providing mailbox services, and speaking for myself, I encourage all in need of this service to use my MSO. I maintain it on 14 085 625 Hertz during daylight hours. Acess code is MSOVKH. Hope to see you on RTTY soon.

CLASSIFIED ADS

30 WORDS $3.00, ADDITIONAL WORDS 5¢ EACH. CASH WITH COPY--DEADLINE 1st of month for following month.

ST5 AND ST6 KITS STILL AVAILABLE FROM HAL. We still have the original HAL ST5 and ST6 parts kits available. The ST5 kit is complete with autostart, AKI AFSK oscillator, and mini-box for cabinet (no drilling or screening) $125..ST6 parts kit has 3 shifts with XTK100 crystal AFSK oscillator and screened and drilled HAL cabinet $275 Purchase from a HAL dealer or direct. HAL COMMUNICATIONS CORP., POB 365, Urbana, IL 61801. 217-367-7373.

WANTED FOR CASH: Teletype wiring diagrams (WD's & WDP's) modification kits SPECS (S-Specs). Send list of available numbers for quote, you copy or we'll copy. Especially need: WDP0014, WDP0029, WDP0031, WDP0038, WDP0041, WDP0042, WDP0043, WDP0047, WDP0039, WDP0048, WDP0049, WDP0050, WDP0052, WDP0053, WDP0054, WDP0056, WDP0057, WDP0058, WDP0059, WDP0060, WDP0061, WDP0088, WDP0090, WDP0094, WDP0095, WDP0086, WDP0099, WDP0100, WDP0110, WDP0111, WDP0117. Write or call Van, W2DLT, Teleprinter Corp. of America, 550 Springfield Ave., Berkeley Hts, NJ 07922. 201-464-5310.

-REBATES-REBATES-REBATES-REBATES-
Even greater discounts on INFO-TECH RTTY-CW equipment. Purchase the M-500 ASR, M-200F Demodulator, and M-300C keyboard at substantially reduced prices! Call or write: DIALTA Amateur Radio Supply, 212 - 48th St., Rapid City, SD 57701. 605-343-6127.

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RTTY-CW EQUIPMENT AT SPECIAL PRICES. All of your HAL RTTY-CW-ASCII equipment needs in stock, at special prices! Mention the "RTTY JOURNAL" and we will provide you with an even bigger discount! We'll match or beat anyones prices! Call or write: DIALTA Amateur Radio Supply. 212 - 48th St., Rapid City, SD 57701. 605-343-6127.

FRED SAYS:"Cash in those Teletype-writer parts." Send list, or UPS them for offer. Ask about personal visit to pick up. Send SASE for list of Teletype parts, supplies, paper, tape gears for sale or trade. TYPETRONICS, Box 8873, Ft. Lauderdale, FL 33310. Fred Schmidt, N4TT. 305-583-1340.

VACUUM TUBES. Current and hard to find, new boxed receiving types only, $1.00 each. Send your list of your needs for availability on present inventory. Milt Levy, W5QJT, POB 13151, El Paso, TX 79912.

WANTED:MOTER BOARD, power supply board and tech manual wanted for DEC LA-34 terminal. B.A. Thunman, W8IGS, Route 1, Augusta, MI 49012. 616-731-5600.

WANTED:SOFTWARE and hookup for IBM personal computer to handle RTTY from HAL ST-6000 demodulator. Robert D. Milligan KA4PNG-6608 N. 18th St., Arlington, VA 22205. 703-533-0650.

ULTIMATE RTTY DEMODULATOR:Dovetron MPC-1000R E-Series demodulator with all extras including solid state cross display, TSR-500D up-down electronic speed conversion, 200 character buffer memory, keyboard controlled word correction, KOS-100 keyboard operated switch, DAS-100 digital autostart, variable character rate, TD inhibit and blank diddle, TID-100 CW ID and triple tone AFSK keyer, as NEW. This is the Cadillac of RTTY demodulators $1300.00 PPD. Also, model 34ASR, $495.00 plus shipping. 34ASR with above demodulator will provide ultimate in 60-67-75-100 wpm RTTY page and tape sending and receiving. Lawrence R. Pfleger, K9WJB, 2600 S. 14th St., St. Cloud, MN 56301 612-255-9794.

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BARGAINS in all Teletype machines and allied items. 28's, 33's, 35's, Telex TWX's & a few 15's & 19's. Much misc. SASE for prices. CB Goodman, 5454 South Shore, Chicago,IL 60614.

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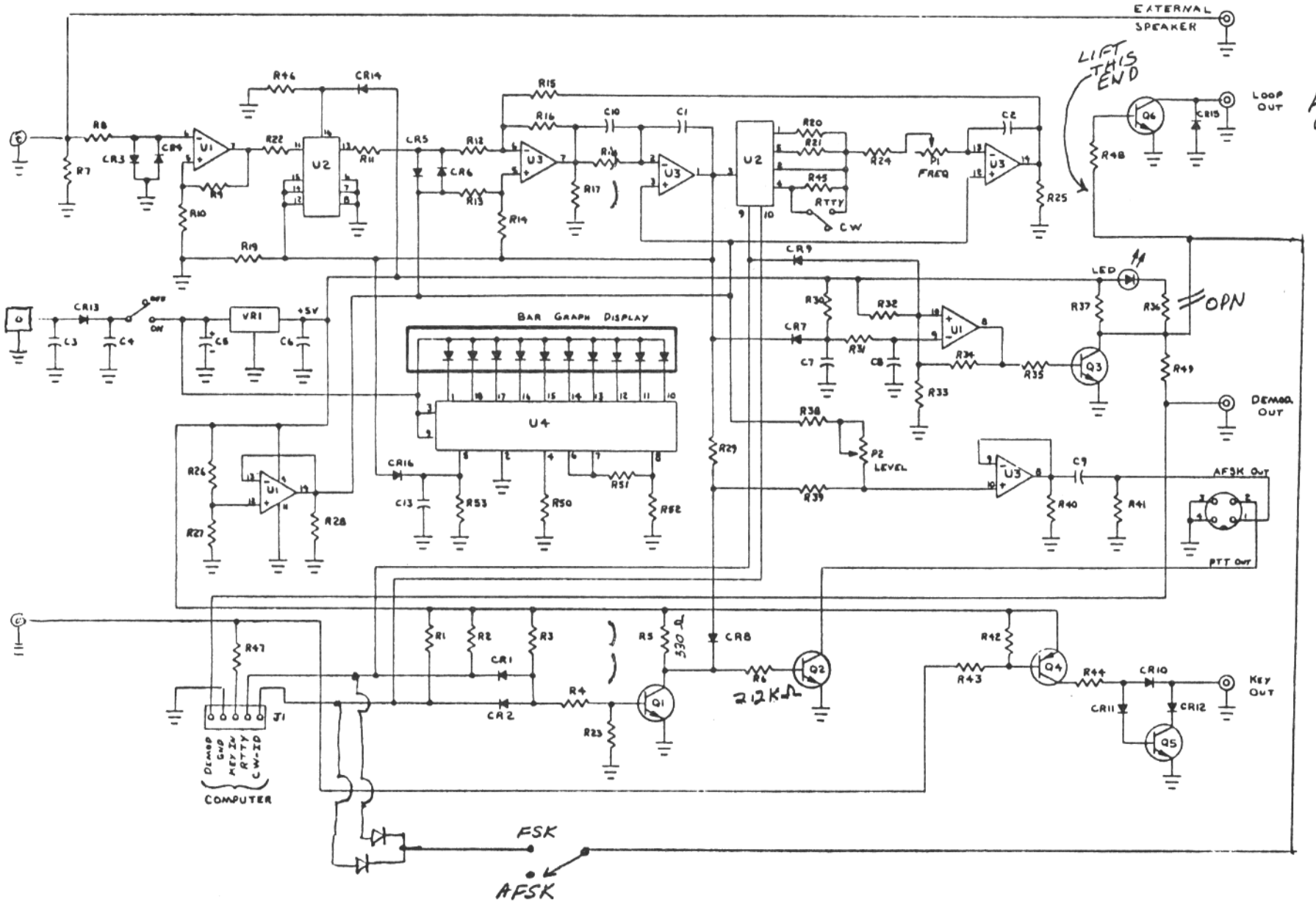

KANTRONICS INTERFACE FSK MOD

BY: WALT AMOS, K8CV
4612 Woodland
Royal Oak, MI 48073

1. Move serial number to the bottom of the case.

2. Buy SPST mini switch and two small diodes from Radio Shack.

3. Drill a hole to fit the mini switch, in the rear panel at the spot where you moved the serial number from.

4. Twist the cathode leads of the small diodes together.

5. Cut the anode ends to $\frac{1}{4}$" and bend up the ends to make small feet.

6. solder the small feet, on the new diodes, onto CR1 and CR2.

7. Unsolder and lift the end of R 48 (1K) that goes to the junction of R 36, R 49 and Q 3.

8. Put the switch leads in series and the new diodes, cathode lead and the free end of R 48 (this makes an OR gate.)

9. Loop out jack now becomes the FSK jack. The switch must be open to return to AFSK (open on mark, closed on space.)

10. You still must use a lead to mike PPT to turn the rig on and off.

Works on ICOM-720A and FT1
opn on mark...closed on space
More info? S A S E please to Walt Amos, K8CV.

Schematic on facing page.

THE QUARTER CENTURY AWARD

The Quarter Century Award is issued by the British Amateur Radio Teleprinter Group on the submission of satisfactory proof of two-way RTTY communications with at least 25 different countries. The award is also available to short wave listeners on a "hear" basis.

Measuring 10" by 13" and printed in red, green and black, the certificate makes an attractive addition to any Amateur Radio station.. Endorsement "stickers" are available for each additional 25 countries up to a total of 200.

Application for the award may be made by any of the following methods:

1. Submission of QSL cards for the countries being claimed. Cards are returned to the owner after checking Submission of photostats or photos are also acceptable. They should clearly show the callsign of the Amateur making the claim and should establish beyonf doubt that the contact was made by two-way RTTY as the mode of communication. This type of claim must be witnessed and a check list signed by TWO other licensed Amateurs.

2. Claims will be accepted based on a check list containing callsigns with date of contact and time, reports given and received and band in use. This type of claim must be witnessed and signed as accurate by TWO officers of a recognised Radio Club or a National Amateur Radio Society.

3. Claims will also be accepted on a contest log submitted for any RTTY contest sponsored by the British Amateur Radio Teleprinter Group. The claim should be made at the same time as the contest log is submitted.

The cost of the award is: United Kingdom 75p
3 Dollars US or 15 IRC's.

Cost of extra "stickers": United Kingdom 25p
Overseas 3 IRC's
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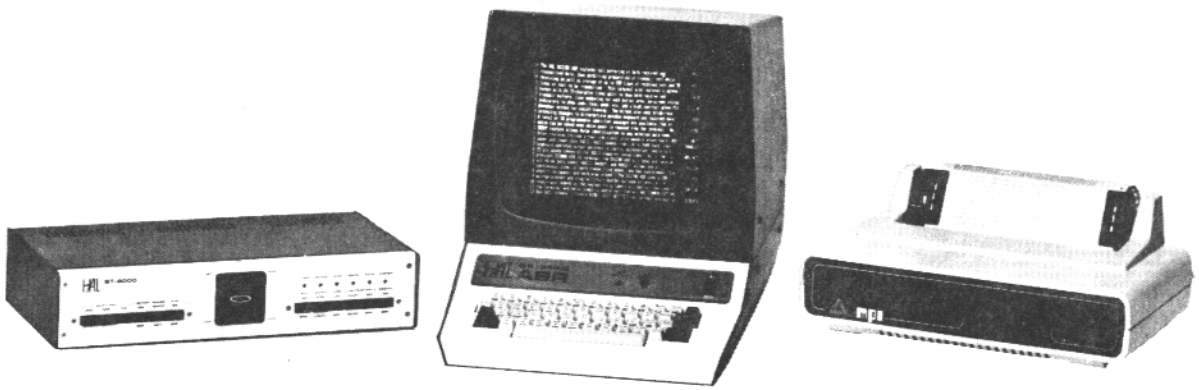
Send claims for this award to: Ted Double, G8CDW, 89 Linden Gardens, Enfield. Middlesex, England EN1 4DX.

QUARTER CENTURY AWARD HONOR ROLL

ON4BX	212	G3HJC	123	W1GKJ	106	K4VDM	103
W3KV	200	K6WZ	118	DL8VX	105	SM6AEN	103
W2LFL	155	VE2QO	113	KØBJ	105	K8YEK	101
G6JF	150	I5WT	111	YB2BLI	105	DJ1QT	100
ON4CK	135	W2IUC	110	DK5WJ	104	DL8KS	100
OK1MP	127	WA6WGL	110	DJ1IJ	103	G8LT	100
VK2SG	127	GI4AHP	109	DJ8BT	103	K3SWZ	100
DK1BX	123	G8CDW	106	I5ROL	103	SM6ASD	100

REGAL RTTY



By popular acclaim – the leader and king of radio teleprinter communications – the **HAL DS3100ASR** and **ST6000.** When combined with the **MSO3100 Message Storage Option** and a hard-copy printer, you have the premier RTTY station. Discriminating operators the world-over choose the DS3100 and ST6000 for their stations over any other equipment. The DS3100 and ST6000 have set new standards of comparison for commercial and amateur RTTY data communications; they are representative of the high standards of quality and performance for which HAL is known throughout the world. Put your best RTTY signal forward with the DS3100 and ST6000!

- **Send and receive ASCII, Baudot and Morse code**
- **Full length 72 character lines and 24 line screen**
- **True "ASR" operation – pretype while receiving**
- **50 Line pretype, on-screen transmit buffer**
- **150 Line receive display buffer**
- **MSO3100 adds 450 lines of MAILBOX message storage**
- **P31 green, 12 inch display screen is built-in**
- **Control functions are clearly marked on keytops**
- **On-screen status indicators with real time**
- **Upper-lower case ASCII with ALL control codes**
- **45, 50, 57, 74, 100 baud Baudot**
- **110, 150, 300, 600, 1200, 1800, 2400, 4800, and 9600 baud ASCII – full or half duplex**
- **1 to 175 wpm send and receive Morse code**
- **Current loop or RS232 I/O interface**
- **ST6000 has tuning oscilloscope and loop supply**
- **Three RTTY shifts: 170, 425, or 850 Hz**
- **Multiple active RTTY filters and detector stages**
- **Crystal controlled RTTY transmit tones**
- **Printers available for hard-copy of all 3 codes**

Write or call for more details. See the DS3100, MSO3100, ST6000, and printers at your favorite HAL dealer.

HAL COMMUNICATIONS CORP.

BOX 365
URBANA, ILLINOIS 61801 **217-367-7373**

VK2EG	100	G3MWI	55	I5O16O	48
I8JRA	89	VE2JR	55	VK5RY	47
I5KPK	87	DJ6XBA	54	G3RDG	46
SM5EIT	84	SM4EMO	54	CT1EQ	45
1313018	83	ZL2ALW	54	W2NZ	45
DL1VR	81	9H1ET	54	I1CAQ	44
YO3AC	78	DJ2YE	53	I5FUE	44
G3ZRS	75	OHØNI	53	I6NO	44
YO2IS	75	PY2CK	53	K8NN	44
ON5WG	74	VE5RG	53	LZ2KRR	44
9M2CR	73	WB2VTD	53	BRS25676	44
KØPJ/6	70	W5QCH	53	Niendorf	44
OZ4FF	70	G3OZF	52	EA3AZX	43
SMØOY	68	IØLVA	52	JA7ML	43
I2OLW	66	N3DF	52	KB9DM	43
DL8QP	65	WA5HBR	52	SM5FUG	43
HB9AVK	65	DF2ME	51	SM7BGE	43
W1MX	65	DJ3OE	51	OK112880	43
I5FZI	64	EA3BLQ	51	OK25350	43
W6AEE	64	EI5BH	51	I2DMI	42
DF7FB	61	F9XY	51	K5ARH	42
G3UUP	61	OZ7RD	51	G4EEV	41
I414707	61	SM5BO	51	JR2TZL	41
I1PYS	60	W7BCT	51	K4CG	41
SL5AR	60	BRS40656	51	OZ2CJ	41
EA8RU	59	G3IIR	50	SMØCBC	41
G3RED	58	G4EJA	50	9H1EL	41
ON7EU	58	K6YUI	50	G3YYD	40
WB3CCZ	58	PAØCWI	50	G4ALE	40
I1COB	57	WA3ZKZ	50	WA9BOW	40
LZ1KDP	57	W8CQ	50		
SM4CMG	57	G3YDR	49		
I2WEG	56	XE1AFU	49		

39 Countries:K2UVV, OZ1CRL, Kurt Wustner.

38 countries: DJ9IR, G4FLM, I5GZS, ISØRUH, VE7UBC, VU2KV, WA3IKK, WB6-ADY, 9A1ONU, L. Reynolds.

37 Countries: I5YTP, VK3DM, W5HEZ.

36 Countries: IT9ZWS, JH1TFF, OZ9GA, VK6PG, WB3HAZ.

35 Countries: EA8XS, FG7XT, GW3IGG, KA7CYK, PY1DCB, PY2QV, VK5WV.

34 Countries: DL7YH, EI3CN, KX6LA, 9K2EP.

33 Countries: HA5FE, I5HZZ, ISOZUD, N9BHH, OK3KFF, SM5HEV, WB3QFE, WA6-CQW.

32 Countries: G2HIO, I1PXC, WA2YVK, WB2WZX, BRS27239.

31 Countries: G3VXO, OE5BRL, VE3CYX, W6CG, WA3JIC/ZP5.

30 Countries: HB9BQL, I1YTL, JH1ISF, K8ZOA/4, KB2VO, PA3ABE, SP1EYG, WB4-UBD, W8GPB, WOCJZ.

29 Countries: DK1AQ, DL5MBI, G3PKT, G4IPZ, G4NJW, IOZAN, KOJH, K1LPS, SMØIIB, SP1PBW, SV1MO.

28 Countries: DF9XI, DJ4TJ, DL8CX, F5QE, G3GGL, I5CBF, K4RN, LA7AJ, LA7QM, OZ1EWX, SP3CMX, VO1EE, W5TZB, WØHAH, 4U1ITU, 3D6AD, A. Mensch.

27 Countries: DL1TV, G3ZWW, G4HYD, HB9Z, IØZSG, JA8ADQ, K8MYF, LA2IJ, OK3ZAS, ON7AZ, OZ9JB, PAOYZ, W2RUI, W3CIX, W8JLN, WØMT, YJ8TT, 4X4MR.

26 Countries: DJ9XBA, DK3CU, DK7UC, DL6ZB, DU1EZF, G4KHX, I1CWX, JA2VFW, OK3KGI, VE3JKZ, VK2BIS, XE1LL, YO3KAA 4X6CV, 9Y4RB.

25 Countries: DK2XV, F3PI, G3CQE, G3-IYG, G3KMI, GI3VDB, I1EPJ, I1ORS, I4-GXF, I8YRK, IC8FHC, ISOESS, ISOTIU, KØHSC, KG6NAA, LA3YU, OK1OAT, OK2BMC, OZ4IJ, SM7BHM, VE3AYL, VE3IR, VE4BJ, VK3KH, W2UGM, W4MWP, W5VJP, W8CAT, WA8BOT, BRS 47426.

List accurate as of August 1982.

From Larry, K1LPS of Vermont comes the following contest results of October 17-18, 1981. Larry states that the results have not appeared in any magazine. So here they are and I hope that the RTTY JOURNAL will receive the 1982 results before a year has elapsed. Gwen Burnett says we will.

1. W3FV	USA	2,946,966
2. K7BV	USA	2,758,022
3. SM6ASD	Sweden	2,369,416
4. JA6GIJ	Japan	2,140,872
5. DJ6JC	Germany	2,109,290
6. K8ND	USA	1,597,065
7. W4CQI	USA	1,410,790
8. ON5WG	Belgium	1,409,350
9. ON7EP	Belgium	1,216,710
10. G3HJC	England	1,212,360
11. WA5HBR	USA	1,127,200
12. G3UUP	England	1,106.280
13. I8JRA	Italy	1,053,900
14. VE2JR	Canada	1,052,312
15. W6JOX	USA	1,015,966
16. VE2AXO	Canada	983,990
17. K1LPS	USA	788,615
18. VE7YB	Canada	738,320
19. VK2NM	Australia	656,450
20. K6WZ	USA	529,275
21. KØJH/4	USA	518,840
22. DK3CK	Germany	401,750
23. VE7DTA	Canada	388,520
24. JR2TZL	Japan	334,400
25. 9M2CR	Malaysia	328,712
26. VE8CM	Canada	319,860
27. VE7DLX	Canada	272,072
28. ON7AZ	Belgium	248,728
29. I4JXE	Italy	228,520
30. VE7BDQ	Canada	193,552
31. WØLHS	USA	177,268
32. K8EF	USA	133,770
33. W3KV	USA	104,560
34. KD4OM	USA	94,312
35. VE5RC	Canada	88,935
36. ON7EU	Belgium	52,696
37. VK2EG	Australia	51,520
38. T12DO	Costa Rica	50,920
39. W1MX	USA	49,481
40. KJ2N	USA	44,632
41. DF7FB	Germany	41,696
42. G3RDG	England	36,630
43. KØBJ	USA	32,990
44. AL7O	USA	24,035
45. DU1EFZ	Phillipines	23,920
46. LA2IJ	Norway	9,564
47. SM5AAY	Sweden	762

S.W.L. Printer Scores

1. OZ-DR-2135	Denmark	2,412,552
2. OK3-27-010 DL8VX	Germany	1,785,420
3. H. Ballengerger	Germany	1,186,670
4. K. Westner	Germany	359,960
5. W. Budwig		87,864
6. ON1-3202		81,924

MORSE, RTTY ATTACHMENTS
FROM "WORLDRADIO" OCTOBER 1982

VIC RTTY

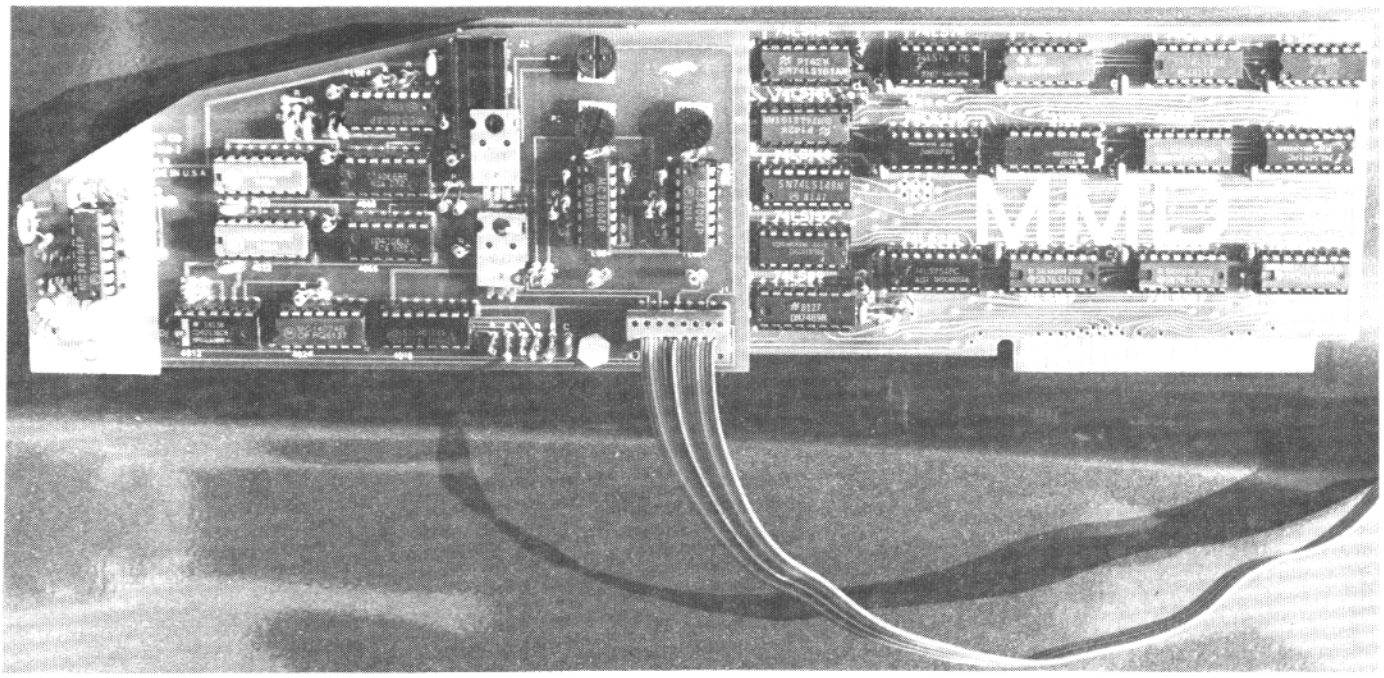
Turn your VIC-20 into a RTTY terminal. Features include split-screen operation (compose your replay in a special text buffer while receiving), four 255-character user-defined messages, 60, 66, 75 and 100 WPM Baudot speeds, Morse code ID, RTTY ID (his call and yours), RTTY CQ message, special UNSHIFT ON SPACE option - 15 different functions and controls in all!

Manual includes instructions on how to modify software for your call and special "permanent" messages. Hardware manual included with various interface designs (RS-232, TTL, current loop, ETC.) as well as info on homebrew and commercial RTTY modulator/demodulators.

VIC RTTY requires VIC-20 computer with 8K memory expansion, recorder, and VIC-20-to-radio interface (RTTY terminal unit and interface.) Interface requires some construction ranging from simple 1 IC TTL interface to multi-IC modulator/demodulator **(for completely homebrew terminal.)** Connection to VIC is through the USER I/O PORT.

Package includes software on cassette, software and hardware manuals, and I/O edge connector: price is

ANNOUNCING MMD RTTY PACKAGE



NEWEST RTTY PACKAGE FOR THE
APPLE* COMPUTER

	MACROTRONICS	IRL	RADCOM	MMD.
INTERNAL UNIT ONLY	NO	NO	YES	YES
USE OF REAL TIME CLOCK	NO	NO	NO	YES
CRYSTAL CONTROLLED AFSK	YES	NO	NO	YES
ANY SHIFT FROM 21 TO 900HZ	NO	NO	NO	YES
80 COLUMN VIDEO**	NO	NO	NO	YES
USE OF EXTRA MEMORY)64K***	NO	NO	NO	YES
DISK SAVE WITH NO LOSS OF DATA	NO	NO	NO	YES
ON-LINE EDITOR (KEYBOARD)	YES	NO	NO	YES
SEL-CAL-MAILBOX	WRU ONLY	NO	NO	YES
SELECTABLE TEXT WINDOWING RX/TX	NO	NO	NO	YES
VARIABLE BANDPASS FILTER	NO	NO	NO	YES
VARIABLE MARK TONE-21 TO 4500HZ	NO	NO	NO	YES
DIGITAL RECEIVE FILTERS	NO	NO	NO	YES

* APPLE IS TM OF APPLE COMPUTER
** 80 COLUMN VIDEO IS PROVIDED BY THE USE OF THE VIDEX OR THE M & R ELECTRONICS 80 COLUMN BOARDS
*** THE MMD RTTY PACKAGE SUPPORTS ONLY THE LEGEND 64K AND 128K MEMORY EXPANSION CARDS

COMMING SOON REAL TIME CLOCK

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EUGENE, OREGON 97402

PHONE# (503) 689-6205

VIC-20 Continued
$24.95. A VIC Morse and RTTY package is $39.95. All orders require $2 for shipping and handling fee, except with certified funds. COD's accepted. Complete catalog of software available free.

For information write to RAK Electronics, P.O. Box 1585, Orange Park, FL 32073.

MMD RTTY/CW APPLE SYSTEM
From MONTY "ROY" MILLICAN, WB7REA

MMD Announces the most technically advanced approach to RTTY terminal interface! No analog filters, all are digital and under control of program and operator. Occupies one slot in Apple bus. Complete system, no tools required, just plug in board and cables. RTTY (Baudot,ASCII) WRU-SEL-CAL-MAILBOX, and CW are implemented, will also receive and transmit "pix" (including overlines). Will run on 80 column boards, ram cards and use clocks for auto logging features. Utilizes the most popular of these cards. ASCII/Baudot speeds to 1200 baud (check sum in ASCII), shift 22 to 1000 Hz., adjustable bandpass by software or operator. Unique buffering scheme, allows disk (write and read cycles, accesses) to occur without loss of received data. Continues to receive and buffer incoming data while simultanously storing to disk, nothing is lost! System also has many security features (mailbox mode) and logging integrety (WRU-SELCALmode). For complete info: MMD, 4163 Fuller Ave., Eugene, OR 97402. Phone 503-689-6205.

YAESU FT-301 MODIFICATIONS FOR RTTY

BY Richard Jansson, WD4FAB
1130 Willowbrook Trail
Maitland, FL 32751

Several recent efforts have been noted, addressing the problem of properly receiving RTTY signals with the FT-301 without awkward reversals of the TU. None of these have addressed the real problem, however. In the FT-301 the USB BFO is 9001.5 KHz, LSB BFO is 8998.5 KHz, and the CW filter is 8999.3 KHz. RTTY can only be received narrowband in the USB mode which provides the Mark signal shifted low, while the normal standard is for the Mark high shift. Use of the CW filter in the FSK mode is with the 9001.5 KHz BFO and the shift is therefore correct only on 80 meters where the BFO is 2.2 KHz "below" the filter.

The answer seemed to be that of using a new BFO frequency of 8997.09 KHz. This allows detection of the RTTY signals with the proper shift and located so as to pass the 170 Hz shift signals with the beat notes of 2125 and 2295 Hz through the CW filter. A new BFO crystal was purchased to the Yaesu specifications in the owner's manual and then I took a hard look at the means to excite it in the FSK mode.

The FT-301 modifications about to be described here are definately not to be tackled by the electronically inexperienced as you can end up with a really messed up transciever. My FT-301 is still whole and in excellent operating condition, but it required a lot of really difficult tracing and soldering.

In the AF unit, PB-1437, the BFO crystals are diode switched in or out of a single oscillator. There are however, no spare leads to provide for an additional switching signal for one more crystal. A "19th" wire lead connection was used, with a subminiature radio control model connector as a "flying lead". The circuit of figure 1 was added along one edge of PB-1437 with the crystal and subminiature ceramic trimmer capacitor nested on top of the existing crystals and trimmers. This new adjustment is accessible along with the two existing ones.

A subminiature toggle switch was attached through the FT-301 lower cover and located in the gap between the mode switch (S5?) and PB-1576, reject control. This toggle will switch the 9001.5 KHz crystal (USB) of the 8997.09 KHz. crystal (FSK-LSB) when the mode switch is in the FSK position.

Further changes were made in the switch/diode logic of the mode switch to provide full transcieve operating capability with a clean AFSK generator into the microphone audio circuitry. These changes are shown in figure 2 and are as follows:

1. Disconnect the FSK generator, PB-1556-6 (AM unit) from the mode switch FSK position.

2. Add the FSK mode toggle switch between PB-1437-19 and S2A-3 rotor and the mode switch FSK as shown.

3. Add 1N914 diode (or equalivent silicon diode) connection to the lead to PB-1498-9.

4. Remove the green wire between PB-1436-4 and PB-1435-13.

5. Add a new wire from PB-1436-4 and two 1N914's connected to USB/LSB and FSK contacts.

6. Add 1N914 diode between PB-1434-9 (D6) and FSK contacts.

The results of these changes are very gratifying with clean RTTY signals through narrow CW filter. I am also thinking of installing a 250 Hz filter in the unused AM filter slot with CW wide/narrow selection. Twenty meter QRM goes away and lost print is greatly reduced. Caution must be exercised when running the FT-301 at full rtty key down power, it will get HOT! I have hooked a quiet muffin fan to blow it at the heat sink and operate that way continuosly without excessive temperatures.

Good luck and I'll see you on 14.090 F1.

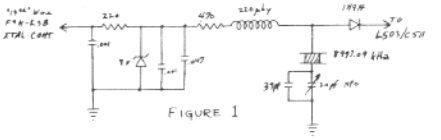


FIGURE 1

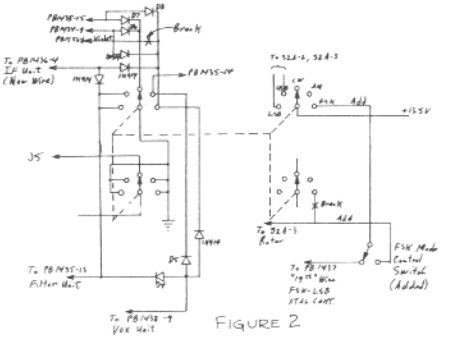
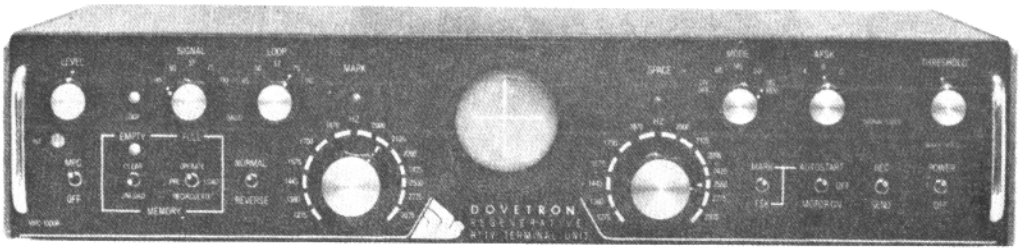


FIGURE 2

MPC-1000R BY DOVETRON

MULTIPATH CORRECTION, IN-BAND DIVERSITY, SIGNAL REGENERATION, UP-DOWN SPEED CONVERSION, 200 CHARACTER FIFO MEMORY, KEYBOARD-CONTROLLED WORD CORRECTION & DIGITAL AUTOSTART



THE MPC-1000R REGENERATIVE RTTY TERMINAL UNIT

The DOVETRON MPC-1000R is a complete Transmit-Receive modem designed for optimum radio teleprinter communications on land, sea and in the air.

Standard features include a high level loop supply and keyer (neutral or polar), EIA and MIL FSK outputs, a phase-continuous AFSK Tone Keyer with three selectable Mark - Space - Shift tone pairs, Mark, FSK & Digital Autostart, Automatic Markhold, an internal RY Generator for terminal unit Self-Test and circuit adjustment, and a Signal Loss Alarm circuit.

The MPC Series is available in six different models to meet your exact requirements.

Complete specifications are available on your request, or call 213-682-3705.

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