

# RTTY

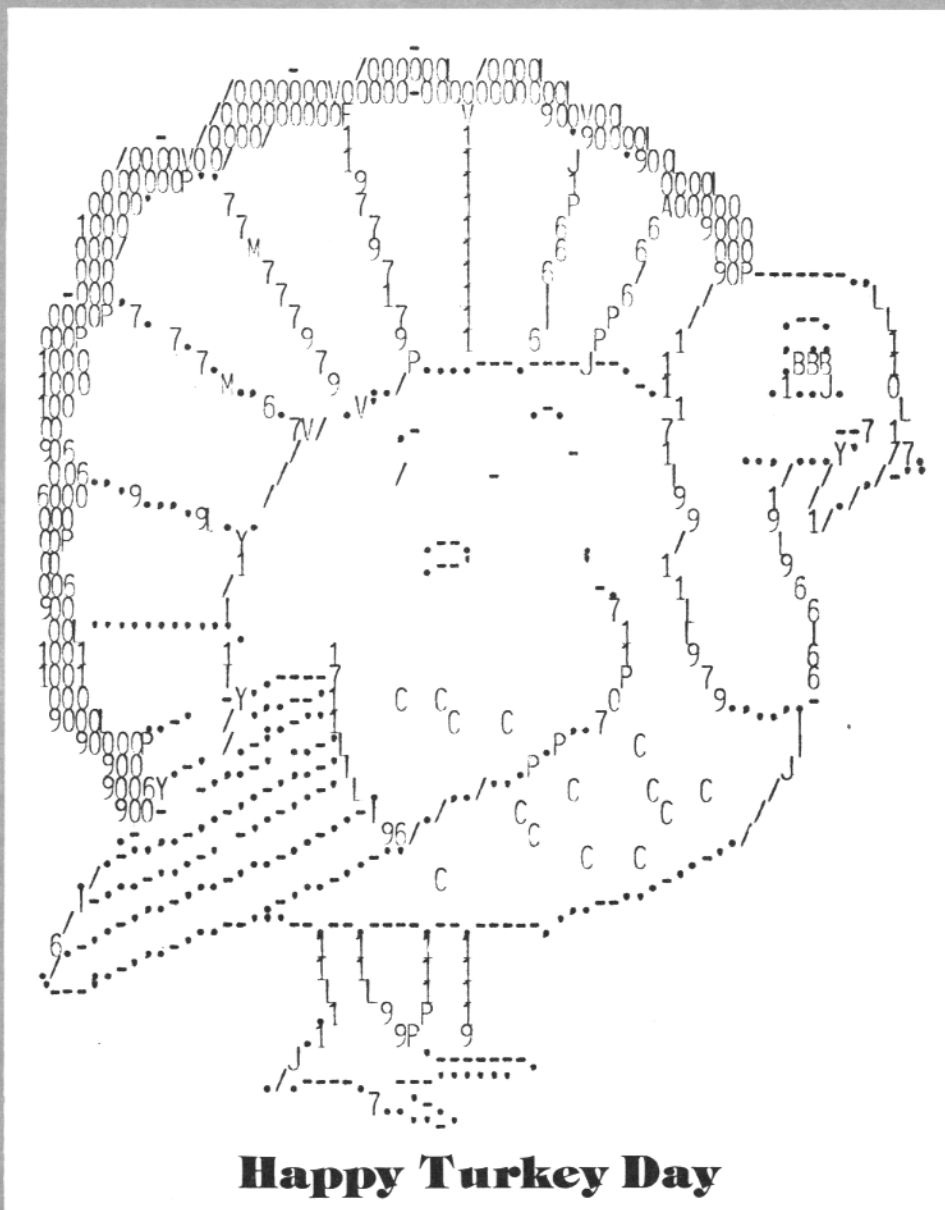
NOVEMBER 1982

## Journal

VOLUME 30 NO. 11

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## RTTY JOURNAL

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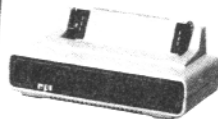


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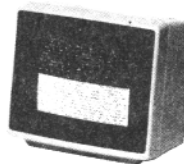
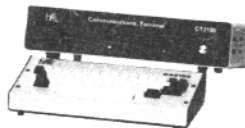
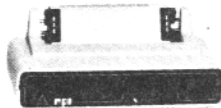


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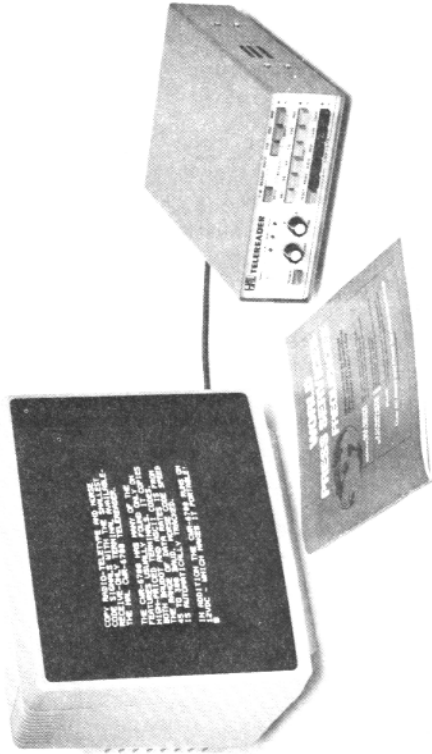
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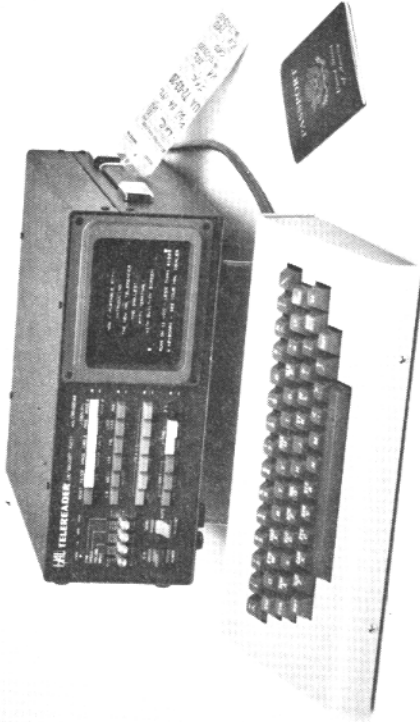
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# HITS & MISSES

## by GEORGE

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

### W1AW SCHEDULE

Starting October 24, 1982 and continuing until April 24, 1983 the W1AW schedule is as follows:

RTTY Bulletins are daily at: 0200, 0500, and 2300 with an extra bulletin at 1600 weekdays.

RTTY Bulletin Frequencies are as follows: 3.625, 7.095, 14.095, 21.095, 28.095 and 147.555 MHz.

DX Bulletins replace regular bulletins on Fridays.

All RTTY Bulletins are sent at 60 WPM with 170 HZ shift then repeated on 110 baud.

### AUTUMN IN SOUTHERN CALIFORNIA

The mornings have started to get crisp out this way. The leaves have started to turn gold and then drop. The sure signs that contest season is rapidly approaching. I hope you will try an RTTY contest this coming season. The fun and excitement will bring you many challenges. Remember, it's not whether you win or lose but the fun of the contest. I hope that a lot of newcomers will try. A contest will sharpen your operating skills and working a new country or contact is a bonus.

SO LONG FOR NOW,

GEORGE, WA6CQW

~~~~~

### A SIMPLE TUNING INDICATOR

By Nat Stinnette See page 11 top

If you are using a 0-1 mA meter for a tuning indicator on your TU, try replacing it with a LED, the larger the better. A readjustment of the meter pot may be necessary.

While working on a TU I tried one and found it gave a better visual indication of proper tuning than the meter. When the signal is properly tuned in the LED will glow. Any flicker or flashing indicates improper tuning.

This month I will be visiting several clubs in the area. I will be traveling north to Los Angeles to visit the Southern California Amateur Radio Computer Club. This club meets the 4th Sunday of each month. The President of the club is Joe Feldstein, KA6BTM, VP Van Foust N6FYD and treasurer Jim Ford N6JF can be contacted for meeting and membership details. Jim's address is: 2415 College Drive, Costa Mesa, CA 92626. The meetings are held at Mercury S & L in Buena Park (corner of Lincoln and Valley View) at 1:30 PM local. Talk-in frequency on 144.76/145.36. The club has a net at 7 PM on Tuesdays on 2 meters at 144.76/145.36. This is the Palos Verde repeater. The clubs newsletter is called Ham Bytes. It is edited by Donald McMillin N6DXA. Ham Bytes is extremely well done and covers a wide spectrum of information. The founding president was Fried Heyn WA6WZO. Fried is running for Vice Director for the Southwestern Division and deserves the support of all RTTY Amateurs. All Amateurs who are interested in computers in ham radio and in particular RTTY should make this club a must. Monthly programs run the gamut of packet radio, Amateur TV to Oscar communications. Why not drop by and buckle your seat belt for a fun and informative meeting.

### SOLAR ELECTRIC POWER

The October 1982 issue of QST has a beautiful cover photo and article on powering radio equipment using the sun's energy. Recently here in San Diego, California we had a photovoltaic specialist conference. RCA scientists demonstrated the use of amorphous silicon solar cells. This new material is really significant in that it is far cheaper than the crystalline silicon now in use. RCA

believes that it can get the material cost of amorphous silicon material down to the point where it will be 80 percent cheaper than the crystalline material. Amorphous silicon photovoltaic power systems could deliver electricity at \$1.00 or slightly less per peak watt. The current state-of-the-art is about 8.5 percent efficient at best. The new material has been able to achieve a ten percent efficiency level. RCA believes it can achieve an efficiency rate of fifteen percent. This appears to be the break even or cost effective level. Today's technology is not cost effective at \$8.00 to \$12.00 per peak watt. The potential of \$1.00 per peak watt would be cheaper than oil or natural gas. The fifteen percent level is about ten years away, but small systems are forseen in about five years. This would be perfect for the Amateur. It sure looks like field day and expeditions to far off lands could get very exciting. The sun belt areas could make this process very exciting.

### CONSIDERATE OPERATORS FREQUENCY GUIDE

W1XP James C. Edgerton took the time to write the ARRL about an RTTY frequency oversight. James pointed out the fact that in the January 1982 QST, page 82 two RTTY frequencies have great significance to the North American RTTY stations. James pointed out 80 meters  $\pm$  3590 KHz and 40 meters  $\pm$  7040 KHz are used by RTTY stations working DX. James is to be commended for taking time to write. The RTTY operator who does not take this time will find more inconsiderate operators using the RTTY frequencies. The limited frequencies we have are not going to get any larger. A tip of the hat to W1XG James Edgerton for being considerate of his fellow RTTY Amateurs.

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SURVEY OF MICROPROCESSOR-BASED RTTY  
TERMINAL SYSTEMS

Crawford MacKeand  
115 S. Spring Valley Road  
Wilmington, DE 19807

During the last two or three years the RTTY operator has suddenly been presented with a bewildering variety of new solid state terminal systems. No longer do we have to suffer (or enjoy, according to taste) the mechanical teleprinters which have been the backbone of RTTY until recently, but the options open to the new RTTY-er or the convert from a "28" or a "15" have multiplied like weeds. At this moment, it seems safe to divide the newcomers (the equipment, not the Hams) into the following three classes.

1. SOFTWARE ONLY

Table 1 shows all the programs that I have found on the market, which will enable you to use a regular microcomputer as an RTTY terminal. Many of these programs are rather sophisticated and take some time to learn. The results of the learning process are frequently heard on 20m. Not all of the micros on the market are suitable for this work, as the RFI problem, both into and out from the computer has to be taken into account. Also there is an apparent lack of commercially available software for some of the popular machines. The S-100 family is missing, and nothing for CP/M! But if you have, or will have, or can use a micro for other purposes as well as RTTY, this is a good way to go.

2. DEDICATED SYSTEMS

If you want a really good system, have no interest in the other uses of a microcomputer, or can afford to have both a computer and an RTTY system, then this is a very attractive route. The software, which is generally inaccessible to the user, has been optimized for the job. The hardware has been RFI proofed, at least in most of the systems that I am aware of, and the dedicated systems probably also provide the neatest and most compact solution. The ASR terminals in Table 2 are all inclusive devices, with memory sufficient for

all normal operations, a good keyboard, and often a built-in CRT monitor. Other devices are the KSO's which are often CW keyboard keyers that produce RTTY keying as a sideline. If CW will remain the primary mode in your station, this may be a useful option. Also included in this class is a group of systems which I have called Code Converters. They generally require a generator such as a KSO (or even a hand key) and will convert between codes, even from Morse to ASCII. In the receive mode, these converters often also have a small display for some 10 to 30 characters and a parallel ASCII interface from which a Centronics type printer, such as an Epson MX80 could be operated. I do not know how practical these converters are for serious RTTY operation, but for casual work they do offer some interesting possibilities.

3. INTERFACE DEVICES

It was not at first obvious to me that there was a further class of system, but it seem useful to consider separately those devices which add hardware to an existing conventional microcomputer to make a terminal for RTTY. They usually seem to contain a demodulator (the Crown ROM116 appears to be the main exception) and provide dedicated hardware interface circuits and a program which is usually in ROM. If the number of these systems on the air is a good guide, then they represent a compromise which suits both the operating style and the pocketbook of many stations. They offer a lot of capability at a good price, especially if you already own a computer, but the program is fixed and the RFI question does still have to be taken into account. Table 3 lists Interface Devices.

(The Snow AR.01 does not fit very comfortably into any of my categories but this S-100 board seems to belong here, although I believe the operating system is a separate entity--on a floppy disk, I expect.)

Abbreviations used in the Tables .

RO Receive only  
KSO Keyboard send only  
ASR Automatic send/receive (i.e. has memory buffer system)

CRT Video monitor CRT is built-in  
uP Microprocessor  
B'dot Baudot  
ASCII American Standard Code for Information Interchange.  
32 char Mtr. +  
10 char Mtr. + Indicates inclusion  
etc. + of a 10 etc. character display.  
+ Monitor not involving a CRT.  
USOS Unshift on space  
SS Split screen  
TU In-built tone discriminator (terminal unit) (modem)  
300BdA 300 Baud speed ASCII code  
NS not specified by manufacturer or known to author  
RY Test message capability-series of RYRY for Baudot systems  
QBF Test message capability-the quick brown fox etc. etc.  
REF. RTTY JOURNAL, QST, HAM RADIO, BYTE, POPULAR ELECTRONICS  
// Parallel-usually parallel ASCII output from printer  
CW Trg Morse training feature-produces random code  
232 refers to RS232 computer interface standard  
TTL refers to TTL logic compatible voltage level interface  
Video Composite video signal for TV or standard video monitor  
Loop Output will handle standard TTY 60mA loop  
@ Partial kit

The material in this survey has been found in the various magazines referenced and in manufacturers and distributors catalogs. If a given item is in error, because of excessive compression to fit my tables or because of misinterpretation of the information available to me, I would be pleased to receive corrected data for future publication.

This is a fast moving area and therefore there is no guarantee that all of these items are still in production. Whichever way you go, good luck and DX.

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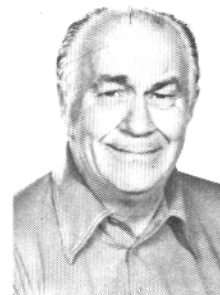
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# DX RTTY



## BY BILL

WØLHS SNYDER, 1514 S. 12th Street, Fargo, ND 58103

"HOW MUCH FOR THAT NEW TRANSCIEVER?"

For awhile it looked as if the bands were going to stay punk all fall; but then, all of a sudden, the MUF climbed up out of the sink hole and 15MHz became alive again. Even 28MHz was open for the poor old northern hemisphere. And that brought out the DXers from their summer hobbies.

As new RTTY gear moved out of the stores and into ham shacks, a lot of newcomers started chasing DX with gusto. As one old timer put it: "RTTY is getting like SSB, and there is a breakdown in manners."

The pile-ups on the rare ones are getting deeper with each new ham trying his luck at DX-RTTY. The calls seem to be getting longer, and the listening less. I think each callup should be limited to one line of about 80 characters, eliminate all the RY's prior to calling a DX station, and let the DX station have a chance to hear someone. One well-known DX station from the other side of the woodpecker curtain, kept calling and interfering with an Antarctic station trying to work the US. When the yankee station came back he said politely: "Don't ask for a QSL card, I don't send cards to people with poor manners!"

The event of the month for me was the arrival of my 100th QSL card! The day before it came, I had a 15 meter QSO with Ron, 4S7RM in Sri Lanka. "Has my card arrived yet?" Ron asked. "I sent it about 10 days ago." Well, the next day there it was, and we had a mini-celebration at our house.

Look for Ron 1700 to 1800Z weekdays on 15 or 20. Weekends try 1200 long path.

Another thrill of the month was a

QSO with Hermann, 5Y4RT; Karl, 5Y4RK; and Brian, 5Y4DA in Kenya. And it happened on my birthday (66, clickty click). I spent a year in East Africa back in 1947-48 and operated VQ4EHG and VQ3GHE. So, what a bag of fun to QSO with 3 of them. (I think they were shaking hands with Tusker Beer at the time.)

Hermann gave this little bit of information to pass on to the DX gang: 270 outgoing QSL cards were burned up in the recent Kenya incident; so if you didn't get one from him prior to this, try again as they will have to be re-issued. POB 14425, Nairobi is the address. Another point of interest is the call signs for Kenya are now 5Y4 instead of 5Z4. I think the whole callsign change program was inspired by printers of stuff related to ham radio.

If you follow SSB and CW DX you will recognize the call sign of Karl, 5Y4RK, as belonging to Karl, K4YI, a real DXpeditioner. He regularly makes appearances from all over Africa, and has, on occasion, been known to work a little RTTY. Karl and Brian work for the State Department and so get to a lot of juicy DX QTH locations. I tried to talk Karl into getting a RTTY rig and dragging that along on his travels.

The next morning I bumped into KA2-MT on Namina Torashima. Jim Nagle, whose stateside call is KH6JAG, makes a routine circuit around the Pacific Islands for the Coast Guard Loran C group. He apparently doesn't stay long, just a couple of days at these juicy locations, so one must be on their toes to snag him. The frequency of the trips will be about every two months. His call signs for the tour are as follows: Iwo Jima, KA2IJ, YAP

"EGAD..THAT MUCH?????????"

in the Western Carolines, KC6MG; Tokyo, KA2CG; Hokkaido, KA9CG; and Okinawa, KA6CG. QSL address is to: Jim Nagle, Box 4503, APO San Francisco, CA 96270.

I had been looking for Jim on Toroshima because the previous morning while I was in QSO with JA1JDD, Taka, (getting a first hand report about his recent visit to the USA); when Dave, K4QX (formerly the famous 5N-ØDOG) broke in to give us the news about Jim. Taka then told us it is illegal for Japanese stations to work the US military call signs in the far east. That was a surprise to me. I don't understand the rationale.

Well, just prior to my QSO with Jim on JD1 island, a Japanese station called him. Jim then told the station it was illegal for JA stations to work KA callsigns. But that's life, I guess!

Along the same lines, Mac, K7BV, tells this story..When Japanese stations want to work from Ogasawara and Namina Torshima they go in by small boat and wait for the tide to go out and ground the boat. That way they are on solid land, and not working maritime mobile. Any foundation to this? Let me know.

Jim was using a model 28 at his Hawaiian QTH, but now has a video terminal, which should make him a pile of friends around the world!

While on the subject of the Pacific I had a nice QSL card from K7ZJD/KH2 in Guam. Bob states he has been on RTTY with an Atari for 3 years now, and was the first one on the mode with that computer. He is using a home-brew modem, disk drive and an Atari 400 with 48K. He runs 500 watts into a vertical array and can be



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



## UNIVERSAL M-600 RTTY CODE RECEIVER

### THE ONLY RTTY UNIT THAT DECODES —

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DX column continued from page 8

found around 1700Z on 20 meters.

CO2FRC from Havana is quite active these days. I've heard mixed things about the QSL situation. WB5HBR, Vance reports getting a return card in just a few weeks. Others say they have worked the club station for the Nth time and still have not received confirmation.

The British Amateur Radio Teletype Group held a rally recently to celebrate the enrollment of the 1000th member! Congratulations to the group, and also to Ted Double, G8CDW, who so ably manages the contests and reports.

Corsica is now on the air in the person of FC9UC. The QSL information is via F5RV. Jean tells us he is also very interested in EME. Although he is a newcomer, he is having a lot of fun with the keys.

Another newcomer is TG9NR..with a Collins 380 and a Robot 800.

This seems to be a big year for commemorative callsigns. 9Y5ØAJC, John tells us the 50 in the call means 50 years of ham radio in Trinidad and Tobago. QSL to #7 Noel Trace, Santa Margarita, St. Augustine, Trinidad, West Indies.

By the time this hits print, HC5KA, Ted, will be working from the Galapagos again. His call will be HC8KA. At his QTH in Cuenca, Ecuador. Ted is using a great long wire 135 feet long and with an average height above ground around 3 meters. If my numbers are correct, his home is at 9,000 feet above sea level. High enough for a two meter whip!

I'LL BET YOU DIDN'T KNOW DEPARTMENT CW words per minute is measured by the number of times the word "Paris" can be sent in one minute. Should be quite monotonous at fifty per!

One of the standbys of the morning RTTY (USA time) is YJ8TT. Augustin informs us he is putting up a seven element beam, and he adds that it should outdo his dipole! He also has a new QSL manager: K8TBW, 588 Maple St., Fostoria, OH 44830. He will also QSL direct ( and I think someone in his household is a stamp collector).

I was having a little rag chew with Augustin one morning when he disappeared from the air. In a few minutes he came on and said: "sorry, Bill, but had a power blackout and I am running on a battery. Can send, but the TV monitor won't work on DC, so see you later."

I have always thought that antenna height didn't make that much difference after a quarter wave off the ground. But the other day I was watching VE7BTO and ZS6DT rag chew while the South African station cranked up his tower to 100 feet. Yup it does make a difference!

Do you know what a BAFFLER is? Well it's a computer buffer with the wrong stuff in it, when you punch it up and put it on the air.

All my sources of choice rumors, and true facts for that matter, keep coming up with a Clipperton DXpedition in the works. The ARRL bulletin has it rumored for the end of November. F8XT reports they are taking RTTY and that FØ0JD will handle the keyboard.

W2PSU, Ken, got 2 QSL cards from KG4WS, an extra one because of the complaints of no confirmation from Gitmo by others.

Ken also tells of his mail assault on UA9PP to get a card. He sent about 15, and after a year and a half of waiting he QSO'd the Russian again. When asked if he had received his card, the UA9 said simply:"It's here on my wall!" I guess the Russian bureau works rather slowly, I just got cards dated 1980.

EAVESDROPPING: "If typing was a requirement for a Ham ticket, we would all be novices"... "I married a rich widow..who hates Ham radio"... "I'm using a vertical but the rotor is busted!"..."There's that darned cursor--tailing me again."..."The ashes of the upper atmosphere are blocking the sunlight, so we are having cooler temperatures and poorer conditions." "I am using a basement beam."..."that DX is rare enough to make bubbles in your blood!"..."Will let you go and wind up your bed springs!"..."Will take the manual for the RTTY gear to

bed with me and put it beneath my pillow."..."I wish one of those electronic genius types would design a new rig with a built-in courtesy chip!"..."the country is being run by a president with a one-track mind, and a narrow-gauge one at that!"

John, W3JF, writes that he is moving to Egypt in November and has his fingers (and toes) crossed so he will be able to operate from SU land. John indicates that he has preliminary verbal permission from the licensing authority, so he may be able to put SU on the RTTY map. He is going to be there for 2 years and his QSL manager will be Tony, WB3HAZ.

John would like to compliment the following who answer QSL cards rapidly: Adnan, 9K2KA; Augustin, YJ8TT; and Ivan, PJ3SF.

John, W3KV, must have better ears than I do, because he always has a good string of worked and heard, even in poor propagation conditions. Among the list is: UA3HR, YU3FX, YU20H, YU70RR, CE3CBG, 9M2DW, 5B4CV, 5N8ARY, 5NØHBG, 5N9FDR, 4S7EA, 4U1ITU, C3ICJ, KG4WS, ZP9CW, EA6KL, EA8RP, SV1DE, CT1CGS, DU1REX, FP8DF and FP8HK. Also John lists a couple of QSL addresses: YB7UN, Box 115 Ambon Island, Indonesia; A4XIZ, Robert Williams, POB 3986, Runi, Sult. of Oman. John is over the 200 mark on the BARTG list!!

Larry, K1LPS (99/81), the Vermont member of the "rare" states club, adds his heard or worked to the list: EI5BH 2100Z, 9K2KA 2200Z, 9M2MW 1130Z, KG4WS 2300Z, YB3AB 1200Z, FØ0JD 0230, HI3ADI 1400Z, KV4BQ 1400 are just a few of the 20 meter listings.

Larry also sends along some QSL information: HC5EA via K8LJG, FM7WO via WB3AKI; KV4BQ Edward Turner, Box 7488 St. Thomas, Virgin Islands 00801; CX2AB via CX7BY.

Larry also has a lot to say about the profligacy of MSO operations on the 20 meter band. He feels that the owners are not playing by the rules of the game; and they assume that the channel is "theirs" and so they don't have to listen before transmitting etc. I'm with you Larry! Just because they have a rock-bound rig, that does





| MANUFACTURER     | DEVICE        | SPEEDS (Baudot & ASCII)         | CW SPEED (WPM) | SYSTEM DESCRIPTION | INTERFACE STDS   | BUFFER & MESSAGE CAP. | FEATURES             | REF.      | PRICE RANGE |
|------------------|---------------|---------------------------------|----------------|--------------------|------------------|-----------------------|----------------------|-----------|-------------|
| 1. HAL           | CR2100        | 45 - 1200 Baud                  | 1 - 100        | RO                 | Audio, Loop, 232 | 1x3500, 2xID          | USOS, SS, TU         | QST8/82   | 850         |
|                  | KR2100        | (45 - 1200 Baud)                | 4 - 50         | KSO                | ASCII, Video     | + Brag ROM            | USOS, TU             |           | 175         |
|                  | GR6700        | 45 - 300 Baud                   | 3 - 40         | ASR incl. CRT      | Loop, Video      | 15lines, ID           | USOS                 | HR8/82    | 500         |
|                  | CWR6850       | 45, 50, 57, 74, 110, 300 Baud   | (1 - 175)      | ASR incl. CRT      | Loop, Video      | 1x255, 2xID           | USOS, SS, TU         |           | 1000        |
|                  | DS2000        | 45 - 100 Baud Baudot            | (option)       | ASR incl. CRT      | Loop, Video      | 1x255, 2xID           |                      |           |             |
|                  | DS2050        | 110, 300 Baud ASCII             | 1 - 100        | ASR incl. CRT      | Loop, Video      | + 10xID               |                      |           |             |
| 2. Infotech      | DS3100        | 45 - 50, 57, 74, 110 Baudot     | 1 - 175        | ASR incl. CRT      | Loop, Video      |                       |                      | RTTY18/81 | 650         |
|                  | (MS0)         | 45 - 100 Baud Baudot            |                |                    |                  |                       |                      | RTTY14/81 | 2200        |
| 3. Microlog      | M200F         | 60 - 132 WPM Baudot             | 5 - 60         | KSR                | NS               | NS                    |                      | RTTY12/80 |             |
|                  | M500ASR       | 110, 300 Baud ASCII             | NS             | KSR (inc. CRT)     | TTL, Loop, Aud   | NS                    | SS                   | RTTY14/82 | 1475        |
| 4. AEA           | ACT1          | 60, 66, 75, 100, 132 WPM Baudot | 5 - 199        | ASR (6800 $\mu$ P) | RS232, Loop Rel  | 10x40, ID             | SS, TU               | QST8/82   |             |
|                  | ATR6800       | 110, 300 Baud ASCII             | 5 - 199        | ASR (6800 $\mu$ P) | 232, Loop Xstr   | 10x80, ID             | SS, TU, BASIC        | QST8/82   |             |
| 5. Xitek         | MBA-RC        | 60, 67, 75, 100 WPM Baudot      | 3 - 80         | Code converter     | TTL, Audio       |                       | USOS, TU & 32        |           |             |
|                  | MBA Reader    | 110 Baud ASCII                  | 3 - 99         | Code converter     |                  |                       | Char. Monitor        |           |             |
| 6. W/DZ          | UDF 170       | same as ACT1                    | 1 - 150        | RO & 32 Char Mtr   | NS               | NS                    | TU                   | QST4/82   |             |
|                  | -             | NS                              | NS             | Code converter     | NS               | NS                    |                      | QST6/82   | 580         |
| 7. MFJ           | 494           | NS                              | Variable       | KSR (8085 $\mu$ P) |                  |                       |                      | QST4/82   | 5350        |
|                  | 496           | 60 WPM Baudot, 110Bd. ASCII     | Variable       | KSO                | TTL, Keyer       | 1x50, 1x30            | CW Trg.              | QST8/82   | 280         |
| 8. ROBOT         | 800           | 60 WPM Baudot, 110Bd. ASCII     | Variable       | KSO                | TTL, Keyer       | 2x256                 | CW Trg. Clock        | QST8/82   | 340         |
|                  | 7000E         | 60, 66, 75, 100, 132 WPM Baudot | 1 - 99         | ASR (8085 $\mu$ P) | NS               | 1x511, 2x64           | USOS, SS, TU         | QST4/82   | 700         |
| 9. Drake (Theta) | 7000E         | 110 Baud ASCII                  | 5 - 50         | ASR                | Video, Loop      | 1x53, 7x64            | Price incl. monitor. | RTTY18/82 | 1180        |
|                  | Codestrr      | 60, 67, 75, 100 WPM Baudot      | 3 - 70         | RO & 8 Char Mtr    | // ASCII         | RY, QBF               | TU                   | QST8/82   | 230         |
| 10. Microcraft   | KB4900        | NS                              | Variable       | KSO                | TTL, 20mA Loop   |                       |                      | QST8/82   | 400         |
|                  | RT1100        | 60 WPM Baudot, 110 Bd. ASCII    | 6 - 60         | RO                 | Video & ASCII    | 4x256                 | TU                   | QST8/82   | 500         |
| 11. DGM          | RT1100        | 60, 66, 75, 100 WPM Baudot      | 6 - 60         | KSO                | Video & ASCII    |                       |                      |           |             |
|                  | MKB2000       | 110 Baud ASCII                  | NS             | RO & 10 Char Mtr   | NS               |                       |                      |           |             |
| 12. Kantronics   | MINI-Reader   | 60, 67, 75, 100 WPM Baudot      | 3 - 80         | Code converter     | Audio, // ASCII  |                       | Freq. Counter        | QST8/82   | 290         |
|                  | MINI-Terminal | 110 Baud ASCII                  | 3 - 80         | Code converter     | Audio, // ASCII  |                       | TU, 10 char.m.       | QST8/82   | 300         |

Table 1



# CLASSIFIED ADS

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

FOR SALE: HAL ST-5000 \$125, AEA Morse Baudot ASCII code reader \$150 manuals Cables, both excellent condition. Bob Johnson, K6SWL, RT.1, Box 351-G, Corning, CA 96021. (916)824-3944.

FOR SALE: PROFESSIONALLY BUILT and wired Flesher TU-170 Demodulator, with input filters and AFSK output \$150-Professionally built and wired 60/20 MA loop supply \$40-"MITE" hard copy printer with manuals and 60/100 WPM gears \$150-INFO-TECH M-70 code/speed converter, wired for WRU and SELCAL \$150-Dentron super super tuner (3KW) \$150-factory overhauled MINT Collins 75A4 receiver with all mechanical filters \$450-MINT INFO-TECH M-200E Tri-mode video Demodulator \$250-mint INFO-TECH M-300C Tri-mode keyboard \$200. Call or write Dick, KØVKH, 212 - 48th St., Rapid City, SD 57701. Phone 605-343-6127.

NEWS NEWS-AMATEUR RADIO'S newspaper "WORLD RADIO." Year subscription is \$9.00. 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. One year \$19.50 US. Canada and foreign surface \$21.50. Europe, Africa and Japan \$28.00. Ham Radio Publishing Group, Greenville, NH 03048.

You need your "RTTY-JOURNAL", you will also need +The window to Europe+ the "RTTY"-magazine, published six times thru the year by the German Amateur Radio Teleprinter Group (GARTG) Order your sample copy now! Surface \$3, Airmail \$5, special reduced rates for the 1981 issues! Contact: W. Puenjer, DL8VX, POB 90 11 30, D-2100 Hamburg 90, West Germany.

TELETYPE PARTS WANTED. Any quantity, any models, highest prices paid. 201-464-5310 Van W2DLT, Box 217, Berkeley Heights, NJ 07922.

BARGAINS IN ALL Teletype machines & allied items. 28's, 33's, 35's, Telex's, TWX's & a few 15's & 19's. Much misc. SASE for prices. C.B. Goodman, 5454 South Shore Dr, Chicago, IL 60615

WORLD PRESS SERVICES FREQUENCIES LIST AND MANUAL (new 3rd Edition.) A comprehensive manual completely covering the field of Radioteletype news monitoring-contains all needed information on antennas, receivers, terminal units, monitors, how to receive, frequencies and times of transmissions for most world radioteletype news and press services. Monitoring these news sources is fascinating shortwave listening. All listed stations transmit in English. Contains three different master lists of times of transmission, frequencies used plus the ITU list of over 80 different news services in all parts of the world. \$8.00 PPD. Universal Electronics 1280 Aida Dr. #J, Reynoldsburg, OH 43068 (Dealer inquiries invited.)

REBATES-REBATES-REBATES-REBATES-Even greater discounts on INFO-TECH RTTY-CW equipment. Purchase the M-500ASR, 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.

FRED SAYS: "Cash in those Teletypewriter parts." Send list or UPS them for offer. Ask about personal visit to pickup. 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.

LIST OF WORLDWIDE RADIOTELETYPE STATIONS IN FREQUENCY ORDER (7th Edition Klingenfuss). Over 2,067 frequencies of stations which have been logged in the last part of 1981. Frequency, callsign, name of the station, ITU country symbol, times of reception and details are included. All types of stations are listed, including schedules of 88 news agency stations on 741 frequencies. 178 special RTTY operation abbreviations are listed. A list of 208 GENTEX destination indicators is attached. Covers all RTTY stations from 3 MHz to 30 MHz, air, metro, government, military, diplomatic services. The only accurate

RTTY list in existence. A must for the serious RTTY enthusiast. \$12.00 PPD. Universal Electronics, Inc. 1280 Aida Dr #J, Reynoldsburg, OH 43068. (Dealer inquiries invited).

CALL SIGN LIST OF UTILITY STATIONS (7th Edition) All RTTY stations, all services worldwide, more than 3,000 callsigns in alphanumeric order. All types of stations are listed. 213 utility stations mnemonics and name abbreviations. Abbreviations for regional states in Australis, Canada, USA and USSR. All ITU country/geographical symbols. Table of allocation of international callsign series as decided at WARC 1979. Regulations for the formation of callsigns. \$6.00 PPD. Universal Electronics, 1280 Aida Dr #J, Reynoldsburg, OH 43068.

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) \$125.00. ST6 parts kit has 3 shifts with XTK100 crystal AFSK oscillator and screened and drilled HAL cabinet \$275.00. Purchase from a HAL dealer or direct. HAL COMMUNICATIONS CORP. POB 365, Urbana, IL 61801. 217-367-7373.

PAPER TAPE FOR SALE: 1" wide x 8" diam. rolls. Asking \$7.00 per box of 7 rolls, you ship. Richard Steck, W9RS Box 642, Lake Forest, IL 60045.

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

FOR SALE. DRAKE FS-4 Synthesizer \$250 use with R4 receivers for general coverage 2-30MHz. Claude Sweger, Box 1842, Ft. Stockton, TX 79735.

HAVE M28's and M35's will swap for Satellite TV reception equipment or what have you? Would deliver more than one TTY to Grand Forks, ND. Wes, 204-669-1675 or 582-5287.

SALE: PERFORATOR TAPE 11/16" wide x 8" diameter, case of 40 rolls \$18.50; Case of 1" perf tape (28 rolls) \$18.50; Teletype ribbons, box of dozen \$7; Model 28 TD stand alone type \$89; Model 28 TD with 3 speed gear-shift \$180; Model 28 typing unit, sprocket feed, as removed from equipment, complete less typebox \$49; Model 28 ASR underdome reperf. Replace your keyboard operated perforator with a reperferator while they last \$79; Model 28 LARP, multi magnet reperf complete with motor and hardware to mount above 28 TD in ASR cabinet \$39; Model 28 LESU, various types \$12; M28 Stock Ticker Strip Printer uses 1" wide perf tape \$49. We carry a full line of Teletype machines and parts. All prices FOB Brooklyn NY. Call Ed, WA2FBY Atlantic Surplus Sales, 3730 Nautilus Ave, Brooklyn, NY 11224. Tel (212) 372-0349.

SALE-RTTY EQUIPMENT-Used 30 day warranty-Drake Theta 7000E \$549.95, IRL-1000 \$395, IRL-1000 with AFSK \$379.95 HAL-C12100 \$674.95 nice used Info-Tech M200F \$399.95, Teco B & W monitor new \$124.95, MC Kay Dymec Model DR22 general coverage receiver exc. condition \$799.95. UNIVERSAL ELECTRONICS, INC, 1280 Aida Dr., Reynoldsburg, OH 43068.

NEW 8" FLOPPIES FOR SALE: MFE 750/751 equivalent to Shugart 850/851 DSDD \$195 each, two for \$375; most 28VDC motors, limited qty 110VAC, specify preference. Manuals \$15, shipping \$7 per drive. John Kelso, RFD #3, Box 445, Pelham, NH 03076. (603) 635-2508  
UT4B SPEED CONVERTOR in rack mount chassis \$100 delivered UPS. 28 ASR perfect condition, extra type box all manuals plus more. \$250. Pick up only John Click, WBOBVO, Box 307, Malvern, Iowa 51551.

Clubs, contest editors etc., please send information on your contest rules, results, and other observations to the RTTY JOURNAL office for inclusion in the KONTEST KALENDAR and Kontest Korner areas. Send to: RTTY JOURNAL, POB RY, CARDIFF-BY-THE-SEA, CA 92007.

Articles of interest to RTTYers are solicited from all of you, as are pictures (black & white preferred). Show the world your ham shack (with you in it). How to do it articles are in particularly short supply. N6ELP.

| VENDOR                 | PROGRAM     | COMPUTER & OPERATING SYSTEM                             | FEATURES                | REF.       | PRICE RANGE |
|------------------------|-------------|---------------------------------------------------------|-------------------------|------------|-------------|
| 1. Heath               | SP-9006     | H8/H19 HDOS, 1 disk<br>H/Z89 48K RAM                    | SS, ASCII, Beudot, CWID | Cat.       | 100         |
| 2. K2GTE               | -           | Atari NS<br>400/800                                     |                         | QST8/82    | 50          |
| 3. W2MMK               | EGBERT      | APPLE II plus 48k RAM +<br>or v. Applesoft DOS 3.2, 3.3 |                         | RTTYJ3/82  | 40          |
| 4. RAK<br>Electronics  | VICRTTY     | VIC-20 3K memory<br>expander needed                     |                         | PE7/82     | 25          |
| 5. COMMSOFT            | RTTY89      | H8/H19 HDOS, 32K RAM<br>H/Z89                           |                         | RTTYJ11/80 | 100         |
| 6. Emerson<br>(MORTTY) | MORTTY      | H8/H19 HDOS v. 2.0<br>H/Z89 32K RAM, Disk               | SS, ASCII, Beudot, CWID | QST8/82    | 100         |
| 7. KH6AKW              | -           | Ohio Superboard II                                      |                         | QST6/82    | 65          |
| 8. WB6UUT              | CLAIRE      | Apple etc. UCSD Pascal                                  | Mailbox program.        | RTTYJ10/81 | 130         |
| 9. DFD<br>Systems      | RT89        | H8/H19 HDOS<br>H/Z89                                    |                         | RTTYJ11/81 | 40          |
| 10. QC Systems         | Super RTTY  | H8/H89                                                  | SS, ASCII Beudot, CWID  | RTTYJ3/81  |             |
| 11. K8EXJ              | BitByter    | TRS80 Level 1,2                                         | RY, QBF, CWID           | RTTYJ3/81  | 130         |
| 12. AP6W               | Radcom Plus | Apple II                                                |                         | RTTYJ8/80  | 190         |

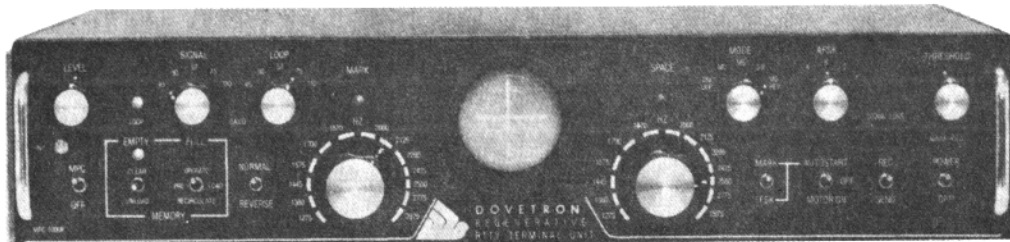
Table 2

| MANUFACTURER    | DEVICE           | SPEEDS (Baudot & ASCII)                                           | COMPUTER & OPERATING SYSTEM                                                                                                   | REP.                                     | PRICE RANGE              |
|-----------------|------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------|
| 1. Macrotronics | A650<br>M800/M80 | NS<br>60,66,75,100 WPM B'dt<br>110 Baud ASCII<br>(5 - 399 WPM CW) | Apple II, Cassette<br>TRS-80<br>PET<br>Apple<br>Exidy                                                                         | RTTYJ1/81<br>RTTYJ2/80                   | 250                      |
|                 | TERMINALL        | 60,66,75,100 WPM B'dt<br>75,110 Baud ASCII<br>(1 - 135 WPM CW)    | TRS80 I, III, BASIC<br>Apple II, DOS 3.2                                                                                      | QST6/82                                  | 500                      |
| 2. Crown        | ROM116           | 60,66,75,100 WPM B'dt<br>110,150,300,600,<br>1200 Baud ASCII      | TRS80 I, III<br>16K RAM                                                                                                       | QST8/82                                  |                          |
| 3. Kantronics   | Interface        | 60,67,75,100 WPM B'dt<br>110,300 Baud ASCII<br>(5 - 99 WPM CW)    | TRS80 + ROM (supplied)<br>VIC20 + ROM (supplied)<br>Atari 400/800<br>+ ROM (supplied)<br>Apple II (5.25" disk<br>is supplied) | QST8/82<br>QST8/82<br>QST8/82<br>QST8/82 | 250<br>240<br>240<br>220 |
| 4. Microtronics | M-65             | NS                                                                | PET, BASIC, Cassette<br>16K                                                                                                   | BYTE3/79                                 | 90                       |
| 5. Snow         | AR.01            | 45,50,56,75,110 Bd<br>Baudot or ASCII                             | 8251 USART board for<br>S-100 systems.                                                                                        | RTTYJ3/81                                |                          |

Table 3

# 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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