

RTTY

September 1977

JOURNAL

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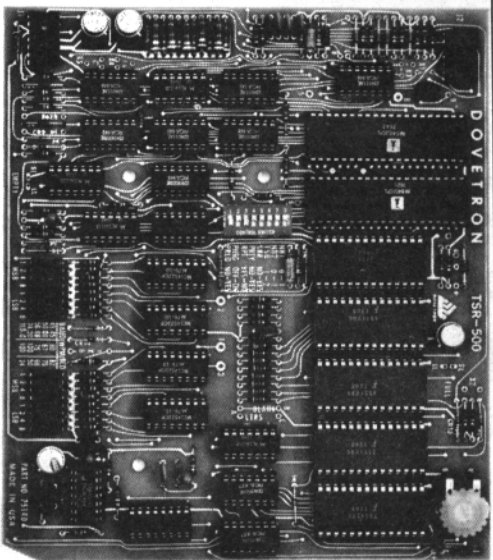
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BACK ISSUES

A duplicate of any back issue may be obtained from R. Wilson, 4011 Clearview Dr., Cedar Falls, IA. 50613. \$1.00 pp. Reprints of all UART articles, \$2.00 pp.

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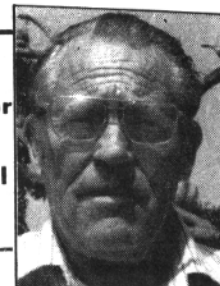
CONTENTS

Hits & Misses
RTTY DX.
BARTG
CARTG
Europe
VHF News
Mod for Kenwood TS-820
Universal Tones
It was Incredible
Audio Digital Probe
Keep it Neat
Contest results
CW Ider Idea
Classified
How much is a BILLION?

COMING IN THE NEXT ISSUE

THE AUTOCOM MA4

By Neil Petlock K9WRL



The JOURNAL is growing. The most recent count shows that we now send the JOURNAL to 105 FREE Countries and 3 communist controled countries. Plus of course every state and possession of the United States. And we have had an increase of 18% in our subscribers.

With the new postal regulations now in force, and wanting to increase the size of the JOURNAL you will see that we have went to a second class mailing permit. After a sampling of 35 subscribers located in various areas of both our country and some foreign countries we found that the delivery was almost as good as first class in most cases. You will also note some change in the subscription rates for foreign countries. We have established one additional distributor in Italy and in Spain. We are looking for someone in Australia that would like to handle this job "Down There". The way this works is like this. we can bulk airmail say 50 copies to Australia for about \$2.50, now if we had a person there to remail at the first class rate there it would mean a great savings for that area. The old rate was \$8.00 per year for airmail, the U.S postage was \$8.60 per year or a loss to the JOURNAL of 60¢ per subscriber. With a person to redistribute in that country the annual rate would be about \$5.00 for airmail service from this country under the new rate system airmail to that and other countries had to be increased to \$12.00 per year. So any one that would like to handle this in that part of the world should get in contact with this office for details. You will not make a fortune but you will be well paid for your trouble.

Airmail subscribers in all countries except Canada and Mexico may if they desire request a refund of the difference in the airmail and former surface rate or we will automatically extend your subscription for an additional year. When we get a distributor in your country you will receive airmail service from this country for the balance of your entire re-adjusted subscription time. At the end of your subscription date the new rate will be in effect. This new rate will be determined by the first class postage in your country and this should be around \$5.00 american. You may still receive individual airmail service under the NEW RATE with an additional payment of \$4.00 to cover the postage expence. Again we want to say, if you desire a refund of the balance of your subscription the JOURNAL will refund you 75¢ for each issue left in your subscription balance.

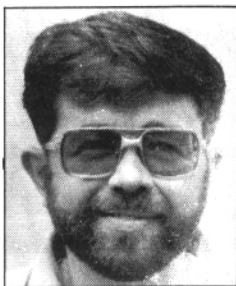
We hope this is satisfactory and that you understand.

Silent Key
"SIG"
- OHØNI -
Aland Island

RTTY-DX

SKIP PRINSEN WB6CYA

3611 Merrimac, San Diego, Calif. 92117



GREETINGS TO ALL.....

With the BARTG contest well out of the way, it is now time to knock the bugs out of the gear and get things rolling for the 7th Scandinavian Amateur Radio Teletype Group Contest. Inadvertently from last month's JOURNAL. I apologize and will do all that I can to see that this doesn't happen again.

Some comments from operator's logs from BARTG CONTEST. "Great fun and a splendid opportunity for remote people like myself in 9M2 to meet new stations and new countries. I found the participants helpful and courteous. No senseless pile-ups though it was very tough as a beginner with no tuning indicator except a keen ear for 2125 Hz -9M2CR

"Lost my beam in a windstorm a week ago so the signal wasn't the best here. I think I qualify for the James Bond award as I received 8 number 007." --WA0TAS.

"On several occasions there were at least five stations from a large south European country running long CQ tapes which effectively blanked out most of the band and nearly all the weak DX--this is both unnecessary and boorish." --G8LT

"Very good contest, lots of activity, keep up the good work." -- K5ARH.

Who's who? With the many new calls that are appearing on the band here in the US with the N calls we will publish your new and old calls so that your old friends will be able to keep up with the changes.

Reminder: We plan to publish the RTTY DX HONOR ROLL in the December issue. Please try to have your totals of worked-confirmed in to me by the end of October. No list is required just the usual two numbers.

WAC on 20 Meters

G2ALE, Addis Combe Amateur Radio Club completed their contacts all during

the BARTG Contest at 1749 GMT, on 27/3/77 while working ZS6BLV. The club will be issued certificate #43.

GW3IGG, J.P.G.Jones completed his WAC on 20 meters during the BARTG Contest. His was achieved while contact-27/3/77. He will receive certificate #44.

The RTTY JOURNAL will issue WAC certificates which will not be numbered so anyone wishing a certificate please send in your cards with return postage for the return of your cards.

The following stations will receive these WAC Awards: SM6ASD, 9HLEL, G3ZRS and OK1MP. Congratulations.

Again this month I have the sad task of reporting that another faithful RTTYer has joined the list of silent keys. OH0NI, Sigurd Mansnerus, known to most as "Sigge", was drowned in a boating accident. Also with Sigge was a son.

VK7TM Tom is now in Tasmania with a model 15 on 50 band. Tom reports that he is working on a VART speed control device for easier copy. He can copy 45 band at present. Look for Tom on around 0600z or thereabouts.

WA2VCZ, Jack in New Jersey reports working A4XFW sorry that I didn't get a time or a date.

8P6AY has been working on the West Coast with fair signals QSL via K4ZS.

During the middle of the month several stations in Sardinia were worked from the West Coast.

DUIAP, Tony, from outside of Manila was seen on the band briefly in June.

The ARRL field day week-end was quite a wild one for RTTY'ers with stations being worked in W6-land from Europe and Australia at the same time. This station worked five Continents during that week-end. We are still looking for Africa for WAC.

BARTG

The results of the 1977 BARTG Contest results are in and to quote Ted Double G8CDW, "the best yet," This was the result of a number of factors, the main one being a period of improved conditions prior to and during the contest and these conditions produced contacts by both long and short path routes at the same time of day. In several cases European stations were making QSO'S WITH THE Far East and with other European stations within minutes of each other. The band conditions remained good until well into the second day by which time a general move towards the lower frequencies became evident. Another factor was the appearance of a number of rare DX stations and this has been reflected in the large number of QCA awards which have been issued as a direct result of contest participation.

Our sincere congratulations go out to Bernie, CT1EQ for his remarkable efforts in achieving first place and this was a just reward for all the hard work he put in while preparing for the contest. The same was also certainly true of Jeff, 9H1EL operating from Malta. At times it seemed as if they were having a private battle with each other! I5WT in third place has improved on his placing of 4th position in last year's contest. A special mention must go to Dave, G3YYD for his fine efforts by operating in a contest where G calls have not been prominent in recent years. Also extend a welcome to Nolen, K5ARH as the top contender from the U.S.

As a result of the increased interest in the RTTY mode, the number of entries was much higher than last year, showing an increase of over 40% and the number of contacts made by leading stations increased by about 50%.

The number of stations that worked WAC was over 31 including 3 short wave listeners.

The number of recorded countries that were active during the contest was 59, and included: Aaland Islands, Alaska, Argentina, Asiatic Russia, Australia, Austria, Barbados, Belgium, Bulgaria, Canada, Canary Islands, Czechoslovakia,

Chili, Cuba, Denmark, England, France, both Germanies, Hawaii, HongKong, Hungary, Iceland, India, Israel, Italy, Jan Mayen Island, Japan, Jordan, Kuwait, Latvia, Malaysia, Malta, Mexico, Monaco, Netherland Antilles, Newfoundland, New Zealand, Northern Ireland, Norway, Okinawa, Oman, Paraguay, Portugal, Sardinia, Scotland, Sicily, South Africa, Spain, Sweden, Switzerland, Turkey, United States, Uruguay and Venezuela.

The majority of logs were well written, but again the summary of times on and off the air was missing on some entries and this caused a great deal of extra work. It may be a qualifying condition in future contests that the time summary is completed.

All in all a most successful event. One which has once again been generally accepted as one of the major events in the RTTY calendar. Despite requests for assistance, the whole operation has once again been a "one man" effort and at the date of these notes some 150 hours have been spent since the contest on the hard graft and it is hoped to have most of the certificates sent out in a month or so. Even so my thanks to all of those who took the trouble to take part and a special thank you to Eric, G3ITR whose publicity via GB2ATG was a major factor in creating the much better support from the G membership this year.



CARTG

The Canadian Amateur Radio Teletype Group (VE3RTT) sponsors the 17th annual W/W RTTY DX "Olympics 22" Sweepstakes.

1. When - October 22nd, 0200 GMT to October 24th, 1977 0200. Not more than 36 hours of operation is permitted. Non-operating periods can be taken at any time during the contest. Summary of times on and off must be submitted with score.

2. BANDS - all amateur bands 3.5 to 28 MHZ.

3. - COUNTRY STATUS - ARRL country list - KL7, KH6 and VO to be considered as separate countries.

4. CLASSIFICATIONS - (a) single operator (one transmitter)

(b) Multi-operator (one transmitter)

(c) SWL Printer

Individual operators of multi-operated stations may submit their logs singly instead of a group log.

5. MESSAGES - Message number, time GMT and zone

6. EXCHANGE POINTS - (a) All two way RTTY QSO's with own zone 2 points

(b) All others will receive points listed in zone chart (same chart as last year)

(c) Stations may not be contacted more than once on any one band. Additional contacts counted on different bands

7. MULTIPLIERS - Each country contacted including ones own on each band e.g. If one country worked on 3 bands three multipliers given each u.s.a. and canadian district will be considered a separate country

8. SCORING - total exchange points X number of countries worked X number of continents (map 6). Canadian Bonus points added last - 100 bonus points for each VE/VO contact on all bands. Use separate log sheet for each band.

Log sheets and zone charts available for SAE or IRC's. Logs must be received before December 1st 1977 in order to qualify.

THE "C.A.R.T.G." MERIT AWARD

The original "CARTG" merit award was created in 1967 to be presented

to the Amateur chosen for his outstanding contribution to the art of Amateur Radio Teletype Communications. It need not necessarily be confined to technical contributions but recognition of any outstanding achievement in the world.

RTTY experimental work, RTTY technical articles, traffic handling or net organizing operation - RTTY, DX for world-wide good will. Assistance to the blind or handicapped in RTTY, Or for any other outstanding RTTY act or achievement.

A plaque has been offered for this award, complete with engraving and the 'CARTG' is pleased to request the names of suggested qualifiers to be sent in for consideration. Recommendations should be sent to: 85 Fifehire Road, Willowdale, Ontario, Canada M2L 2G9 or to Alan Venning, VE7LL, 6171 Brantford Avenue, Burnaby 1, British Columbia, Canada, V5E 2T8.

ALL VE/VO on RTTY

RULES

1. Contacts must be two way RTTY - only, any date.

2. Award will be a certificate, numbering from one.

3. There is no charge for the award, but the necessary QSL cards are to accompany the request. These will be returned.

4. An official of a RTTY Group or Society may inspect and send in a signed list of such QSL cards, including all pertinent information (in place of sending the actual QSL's)

Send all requests to:

THE CANADIAN AMATEUR RADIO - TELETYPE GROUP VE3RTT

85 Fifehire ROAD, Willowdale, Ontario, Canada M2L 2G9.

• • •

There's a rumor afoot that the letters D.C. after the word Washington stand for darkness and confusion.

EUROPE

The Deutscher Amateur Radio Club (DARC) has the honor of inviting amateurs all over the world to participate in the European DX Contest.

1. CONTEST PERIOD: 0001 GMT, Saturday, 12 November to 2400 GMT, Sunday 13 November 1977.

2. BANDS: All bands 3.5 thru 28 MHZ.

3. CLASSIFICATIONS: Single operator-all band; Multi-operator-single transmitter.

4. REST PERIOD: Only 36 hours of operation out of the 48 hours are permitted for single operator stations. The 12 hours of NON OPERATION may be taken in one, but not more than three periods anytime during the contest.

5. EXCHANGE: A contest QSO can only be established between a non-European and a European station. The usual five or six digit serial number RST report plus a progressive QSO number starting with 001.

6. POINTS: Each QSO will count one (1) POINT. A station may be worked once per band. Each confirmed QTC given or received-counts 1 point (see BELOW).

7. MULTIPLIERS: The multiplier for non-European stations is determined by the number of European countries worked on each band. Europeans will use the last ARRL countries list. In addition, each call area in the following countries will be considered a multiplier: JA, PY, VE, VO, VK, WK, ZL, ZS and VA90.

The multiplier on 3.5 MHZ may be X by 4.

The multiplier on 7.0 MHZ may be X by 3.

The multiplier on 14/21/28 MHZ may be X by 2.

8. SCORING: The final score is the total QSO points plus QTC points .. multiplied by the sum total multipliers from all bands.

9. QTC TRAFFIC: Additional point credit can be realized by making use of the QTC feature. A QTC is a report of a confirmed QSO that has taken place earlier in the contest and later sent back to a European station. It can only be sent from a non-European

station to a European station.. The general idea being that after a number of European stations have been worked, a list of these stations can be reported back during a QSO with another station. An additional one(1) point credit can be claimed for each station reported (note special regulations for RTTY, see #13).

a) A QTC contains the time, call and QSO number of the station being reported, i.e: 1300/DAIAA/134. This means that at 1300 GMT you worked DAIAA and received number 134.

b) A QSO can be reported only once and not back to the originating station.

c) ONLY a maximum of 10 QTC's sent. station is permitted. You may work the same station several times to complete this quota. Only the original contact, however, has the QSO point value.

d) Keep a uniform list of QTC's sent. QTC 3/7 indicates that this is the 3rd series of QTC's sent and that 7 QSO's are reported. Europeans may keep the list of the received QTC's on a separate sheet if they clearly indicate the station that sent the QTC's.

10. CONTEST AWARDS: Certificates to highest scorer in each classification in each country, reasonable score provided. Continental leaders will be honored also. Certifications will be given to stations with at least half the score of the Continental leader.

11) DISQUALIFICATION: Violation of the rules of this contest, or unsportsman-like conduct, or taking credit for excessive duplicate contacts will be deemed sufficient cause for disqualification. The decisions of the contest committee will be final.

12) LOGS: It is suggested to use log sheets of the DARG or equivalent. Send large size SASE to get the wanted log and summary sheets (40 QSO's or QTC's per sheet.)

13. SPECIAL REGULATIONS FOR RTTY: In the RTTY section of the European DX Contest also contacts between all continents and also one's own continent are permitted and count one (1) point per QSO. Multiplier will be counted according to the European and ARRL countries list. QTC traffic is allowed between all stations (sent and received), but not between stations in the same country. SWL logs are appreciated for according rules.

EUROPEAN COUNTRIES LIST.

14. DEADLINE: RTTY, December 1st.
 C31-CT1-CT2-DL-DM- EA- EA6-F-
 FC- G-CCGUER-GC JER-GB-GI-GM-
 Shetland-gw- HA-HB9-HBØ-HV-I-IS-IT
 JW Bear - JW - LA - LX - - LZ
 M1 - OE - OH - OHØ - OJØ - OK
 ON - OY - OZ - CA - SM - SP - SV
 SV Crete - SV Rhodes - SV Athos
 TA1 - TF - UA1,3,4,5, - UA2 - UB5
 UC2 - UN1 - UO5 - UP2 - UQ2 -
 UR2 - UA Franz Joseph Land - YO
 YU - ZA - ZB2 - 3A - 4 U1-9 H1
 CRITERIA FOR THE AWARDING OF
 CERTIFICATES AND TROPHIES IN THE
 WAEDC

1. MINIMAL REQUIREMENTS for a certificate or a trophy are 100 qso's or 10,000 points. In addition, at least one of the following conditions must be fulfilled.

A) CERTIFICATES

- a) TOP score in a country respective district.
- b) In countries or districts with high participation, an additional certificate

will be given for each full block of ten participants.

c) Members of the top ten or top six (multi-op) lists.

d) Continental winners.

e) Stations with at least half the score of there Continental winners.

f) Participants with at least 250,000 points.

B. TROPHIES

a) Continental winners in the single operator category are awarded a plaque.

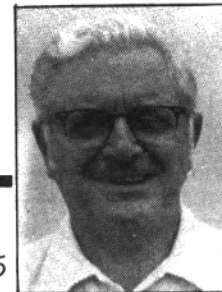
b) Continental winners in the multi-operator category will be awarded a plaque if they have at least 100,000 ner in the single operator category in their continent.

c) A station may receive a plaque in the same category only once within a three year period.

d) Special plaques will be presented to all members of the top ten (six if they have been in this list for at least five times.)

e) The WAEDC Committee reserves the right to honour outstanding achievements in the contest by additional - plaques.

VHF RTTY NEWS



CHUCK EDWARDS W6MNO

4726 Barbarossa Drive - San Diego, CA 92115

Well here we are...entering into the second issue of our VHF RTTY NEWS. It has been fun but.... the responses from our readers, so far, has not been exactly overwhelming, to say the least. I do hope, that everybody will agree that this column will be interesting only, if we have outside information from all of YOU out there. And, not only in this country, but from all over the world where there are teletype-writers! I felt a little hurt to my pride, when I found that the only inputs I had, so far, were from foreign countries!! Come on, my fellow Americans, let's rally up to it and show that we too can write. Any unusual activity will do. I know that there is a lot of interesting things happening in the RTTY WORLD.

For instance; the other day I was quietly working on a project in my shack when the SEL CAL started up and printed out my answer to a call. Don, W6KCW came back printing that he is on his way over to see me and that he is "mobile in motion."

I looked at the print in disbelief, as I knew that good old Don, our erstwhile Editor and Publisher, had been mobile, teletype before (with an extension cord tied to his garage and house current). I answered him back asking where he was, thinking still of that extension cord. Back he came, with perfect print, saying that he is on Freeway number five about twenty miles from my house, and no... he did not have an extension cord running from his house, as I had suggested.

All of this hit me right in the bottom of my stomach and made a warm feeling all over. Here was history in the making. Old Don really was mobile in motion with his teletype. He was using a Mite and a ST-5 terminal unit with a home brew converter and power

supply that ran off of the battery of his mighty Fiat automobile. Now how about that!!

About that time our DX Editor, Ship,

About that time our DX Editor, Skip, WB6CYA broke in to get into the historical moment and we had a three way robin going that was as fine a QSO as I have ever had with Don and Skip. It just goes to show that teletype in motion is really practical and can be done, even in a car (tiny though mighty) like Don's. I have included a picture of his set-up so you will believe it. A picture is worth a 1000 words. To top it off Don says that he will be doing more of this "teletype in motion" bit all over the country, so--- watch out and smile---you too may be on teletype in motion.

Good news from the British Isles!! The British Amateur Radio Teleprinter Group of 89 Linden Gardens, Enfield, Middlesex, England is going to run a VHF distance contest on 144 and 432 MHRZ. The date and times for this contest will be: September 10, Saturday between 1800-2300 GMT, and September 18th, 1977 at 0700-1200 GMT. Information on the rules and regulations for this contest may be obtained from Ted Double at the above address. This sounds like a lot of fun, for sure. Ted has done a lot of excellent planning.

Our publisher, Don, W6KCW, and I have been doing some planning on just such a contest here in the U.S. using VHF frequencies. We will keep you informed thru this column, as it develops. We sure hope that Ted, G8CDW will keep this editor informed on the progress of his contest and how things worked out, how many participants, and who the winners are with their respective scores. It will be fun to compare our results with those of Teds' contest.

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Modification of the Kenwood TS-820 for AFSK

Hank Sharfe W6SKC
672 Freemont Avenue
South Pasadena, CA 91030

MODIFICATION OF THE KENWOOD TS-820 FOR AFSK RTTY OPERATION WITH 500 HZ CW FILTER.

With the 500 Hz. CW filter (Kenwood Part Number YG-88C) installed per Paragraph 6.2 (Page 34 of the TS-820 Operating Manual) and with the moveable connector IF2 installed in Location B per figure 25 (also on page 34 of the operating Manual), narrow shift (170 Hz) standard tones (mark 2125 and Space 2295) may be received thru the TS-820 with the mode switch set to the FSK position.

To operate the TS-820 in an AFSK configuration, it is necessary to transmit with the Mode Switch in LSB,

because when in transmit, the FSK position of the TS-820 generates its own carrier internally, which in turn is meant to be FSKed (not AFSKed).

The following modification permits AFSK operation in both LSB and FSK. The modification itself converts the FSK position of the Mode Switch to a second LSB mode, but with the 500 Hz. filter in the bandpass instead of the 2400 Hz SSB filter.

After modification, AFSK RTTY may be transmitted in either the LSB or FSK position of the Mode Switch, and as before, may be received in either position also.

MODIFICATION

With the top and bottom covers removed from the TS-820, locate the front panel Mode Switch, S-6. Although the switch consists of 5 wafers with 10 different switch sections, Kenwood only utilizes 8 of them. Of these 8, only 5 need be modified.

For the sake of this modification, the deck closest to the front panel will be referred to as Deck 1. The last deck on the switch will be Deck 5.

With the TS-820 right-side up, and starting with the front-most deck:

DECK 1 TOP: Locate diode D2 on switch and install jumper across diode.

DECK 2 TOP: No change.

DECK 3 TOP: No change.

DECK 4 TOP: Terminal 5 has no connection on it. Install a jumper from this terminal to terminals 3 and 4 which have a blue wire connected to them.

DECK 5 TOP: No change.

Turn the TS-820 upside-down and modify the bottom side of the Mode Switch in the following manner. Again, Deck 1 is closest to the front panel.

DECK 1 BOTTOM: Clip the two wires (one is black and the other is white with a red tracer) from the switch terminal. Reconnect the two wires together, but not to the terminal.

DECK 2 BOTTOM: Clip the white/purple-Tracer wire from its terminal and tie back so that it cannot short to anything else. Add a jumper from this terminal to the terminal just to the left of it (looking from the front of the TS-820).

DECK 3 BOTTOM: Clip black wire from its terminal and tie back so that it cannot short to anything else. Add a jumper from this terminal to the terminal just to the left of it (looking from the front of the TS-820).

DECK 4 BOTTOM: No change.

DECK 5 BOTTOM: No change.

With the TS-820 still upside-down, locate the X43-1110-00 board. This is the "voltage-divider" board in the center and towards the rear of the transceiver.

Locate the orange wire that is wire-wrapped on Terminal FSB of this board.

Cut the wire loose from the FSB terminal and tie it back so that it will not short to other terminals or components.

This completes the modification of the TS-820 for narrow-filter AFSK RTTY operation with the Mode Switch in the FSK position.

Replace the TS-820 in its cabinet.

OPERATION

When the front panel Mode Switch is now placed in the FSK position, the TS-820 is actually in LSB (lower side-band) and the CW (500 Hz.) Filter is switched into the IF section in place of the SSB 92400 Hz.) Filter.

Connect the TS-820's PHONE PATCH OUTPUT to the audio input of the TU.

Connect the TS-820's PHONE PATCH INPUT to the AFSK output of the TU.

The tones of the AFSK Tone Keyer in the TU should be set for 2125 Hz. Mark and 2295 Hz. Space, which is 170Hz. narrow-shift.

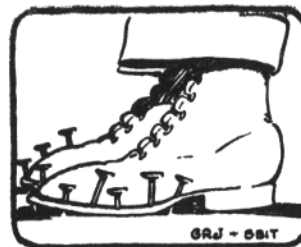
Tune up the TS-820 in the normal manner, switch to the LSB and set microphone gain for 50 watts output, as read on a good quality in-line watt-meter.

Switch to the FSK position. If power output drops slightly (because of additional attenuation thru the 500 Hz. CW filter), increase microphone gain slightly for 50 watts output.

When in Receive, the Passband Tuning (IF Shift) will normally be set at 10 o'clock when using the LSB position and ZERO (straight up) when operating the FSK position.

Generally, AVC should be turned OFF for lowest error-rate copy on marginal signals.

The internal Audio Monitor may be used to "keep track" of the Memory, CW-IDer, etc.



COULDN'T RAISE A
SOLE TONITE, OM

Special note

I wish at this time, to express my sincere thanks to the new publisher Mr. Don Crumpton, W6KCW for his permission to make the reprints of the RTTY JOURNAL.

Also a special thanks to the past .. publishers Mr. Dusty Dunn W8CQ and Mr. Merrill Swan W6AEE, to the RTTY Society of Southern California, and to all the past Editors and Authors, whom without their permission these reprints would not have been possible. To Irv Hoff W6FFC for the fine articles he has written, and also thank you Mr. Ed Phillips W6ZJ for your kindness in letting me use your original copies to complete my file, and to Merrill Swan again for taking the time to help out a perfect stranger. And to all you wonderful fellows.... the RTTY Amateur group.....

R.H. Wilson WB0ESF "RED".

New Equipment

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TTL levels simplify interfacing.

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Power requirements: 5 v. @ 200ma
(10%), 12 v. @ 20 ma, 60 ma.
loop supply.

See ad this issue.

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It was incredible

Scott M. Freeberg, WB9WFA/W9HHX
MLH - 103 MSOE
1025 N. Milwaukee Street
Milwaukee, Wisc. 53201

In view of the recent comments about the lack of 40 meter RTTY, I would like to suggest a means to open this band to RTTY. It appears to me that no one goes to 40m because they assume that they will be the only station there; I know, I've felt that way at times. There must be a way to show favorable results.

Forty meters appears to be a stable band to work consistent RTTY 'DX'. In past RTTY contests, I've had excellent results on 40m RTTY with solid contacts to both coasts and into South America. I regularly copy WIAW and find 40m to be the most efficient .. frequency for dependable reception.

Forty meter RTTY offers yet another benefit, a new definition for DX. The original concept of DX has been laid aside and replaced with the idea that DX means chasing some rare country on 20m and everything else is considered 'local copy'.

Well, from what experience I've had on 40m RTTY, the aim of chasing may be the same but in a different proportion. When I worked K6WZ on 40m one night, I was really proud of that contact and the same was true when I worked WIAW. This type of 'DX' .. reminds me of the original definition where 'a few bold souls ventured down into the hinterland'.* I have . printed all around the world and now find an adventurous spirit to print around our own country on a band . where few tread; unfortunately too few.

In the March issue of the JOURNAL Herb, WB5HVE, made an excellent suggestion - a contest restricted to 40m RTTY. With something like this, it would expose more people to the potentials of 40 meters. If there would be enough initial interest in this idea, I, representing the Milwaukee School of Engineering ARC W9HHX, would then like to offer a transcontinental RTTY contest conducted solely on 40m. Any suggestions or criticism of this idea would be greatly appreciated.

Each person holds his own concept of DX; I find the following phrase - written by Clinton B. Desoto * in his famous 'TWO HUNDRED METERS AND DOWN', 1936, to be most inspiring. '...a large number of stations were heard the most notable performance being the contact between Reinartz, IXAM, and W.H. Hoffman, 9EK, in Madison, Wis., which was copied in its entirety by Frank C. Jones, 6AJF, of Berkely, CAL. An amateur signal being heard across the continent...IT WAS INCREDIBLE?

~ ~ ~

NOTE

PROGRAMMED PROMS FOR THE VE3 CTP CONVERTER

Because of the interest shown in the VE3CTP ASCII/BAUDOT - BAUDOT/ASCII code converter articles in the Oct 76 and Oct 77 RTTY JOURNAL (and soon upcoming in HAM RADIO), I have been furnishing Uarts and Fifos for that project. In addition I have had requests for the PROMS's used in it.

The popular 8223 PROM specified is now obsolete and the surplus sources for it have dried up. The need for a readily available replacement now exists. The 8223 was easily programmed with simple circuitry and procedures. However, the currently available substitutes cannot be so programmed with complete safety.

As a result, I have arranged to obtain a supply of a 100% plug-in replacement for the 8223, programmed with the VE3CTP truth tables listed in the articles. As a bonus the chip has tri-state outputs, thus eliminating the need for pull-up resistors. (See classified ad in this issue)

Peter Bertelli, W6KS
5262 Yost Place
San Diego, Calif. 92109
(714) 274-7060

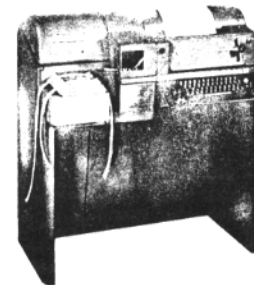


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WA6PMA



Model 28KSR

DOUG

1977 BARTG RTTY CONTEST RESULTS (SINGLE OP)

1977 BARTG RTTY CONTEST RESULTS (MULTI-OP)

1.	CT1BQ	488 160	55.	W6JQX	59 126
2.	9H1BL	409 464	56.	SM6AEN	57 330
3.	I5 WT	281 160	57.	GI4AHP	56 760
4.	I5KPK	270 560	58.	VK2SG	54 318
5.	G3YYD	258 560	59.	WB0LSY/V ₂ 7	54 080
6.	K5ARH	235 056	60.	W7CBY	48 790
7.	SM6GVA	230 838	61.	SM6CAL	45 936
8.	PJ3AR	229 600	62.	9M2CR	43 740
9.	W3FV	219 186	63.	K1GYF	41 650
10.	W2NZ	218 988	64.	JA7ML	39 728
11.	W4CQI	217 816	65.	K9KHI	39 000
12.	VE5RG	211 224	66.	DJ9IR	38 874
13.	K0PJ/6	201 096	67.	G8LT	38 584
14.	P8XT	200 800	68.	VK3KF	38 080
15.	SM6ASD	193 546	69.	VE7DTA	37 314
16.	I3RGH	191 368	70.	VD1EE	36 480
17.	9K2EP	190 950	71.	K4JAF	34 752
18.	DL8KS	186 020	72.	LA3YU	31 140
19.	DJ6JC	178 296	73.	JA4ONZ	30 536
20.	I3FUE	172 672	74.	G4EDR	28 776
21.	WA0TAS	164 696	75.	PA0CWI	27 318
22.	LX4MR	160 800	76.	DL1OY	27 280
23.	W0HAH	157 568	77.	W8GKW	27 140
24.	K7BV	156 552	78.	G4SEW	24 640
25.	I20LW	156 110	79.	K4VDM	24 200
26.	K6WZ	154 224	80.	DJ3OE	23 376
27.	I5HZZ	147 120	81.	SM7BGL	23 300
28.	OH0NI	145 580	82.	SM6BUV	23 200
29.	WA0YDJ/4	139 356	83.	G3WGM	22 800
30.	W3KV	126 654	84.	DK4IS	22 608
31.	VE2QO	111 606	85.	VE7BDQ	22 584
32.	W7MI	110 922	86.	W1ID	19 740
33.	OZ4DZ	109 872	87.	JY1	19 680
34.	UA9PP	103 740	88.	F6BIQ	19 152
35.	DM2AEC	103 152	89.	VK5WV	18 420
36.	JA9AIG	100 768	90.	OH1PS	18 200
37.	IK2WEG	98 884	91.	0E50A	17 850
38.	OK1MP	92 922	92.	G3LIR	17 094
39.	LA7AJ	91 332	93.	ZS6BLV	15 876
40.	WA9AKT	87 360	94.	W4YZ	12 960
41.	0E3EK	86 950	95.	A4XGB	11 576
42.	VE2JR	86 944	96.	PA0WDW	11 040
43.	I0LVA	86 142	97.	PA0YZ	10 500
44.	GW3IGG	84 600	98.	F5DE	10 234
45.	YV5GU	84 130	99.	VE3BPM	10 200
46.	G2PB	83 424	100.	JR6AG	10 062
47.	G3RED	81 236	101.	G3PUD	8 880
48.	ON5WG	77 486	102.	9A2MW	7 800
49.	G3HJC	77 040	103.	OZ4XR	6 500
50.	K5ETA	73 584	104.	SM6FTA	5 368
51.	K1LPS	67 032	105.	DK5SR	4 224
52.	ZL1WN	64 676	106.	G3RDG	2 676
53.	DM2BDL	60 550	107.	F2SF	2 320
54.	HB9AVK	60 312			

1.	J1PTS	388 448	8.	TF3IRA	102 460
2.	ISAA	368 220	9.	DK0OW	68 720
3.	WIMX	297 042	10.	OK3KFF	64 974
4.	OK1KSL	183 024	11.	HA5KPU	51 578
5.	I1COB	179 208	12.	G3UUP	47 808
6.	G3ZRS	162 760	13.	OZ2CJ	42 840
7.	G4ALE	118 614	14.	LZ1KDP	38 280
			15.	OK1DFP	26 950

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C&H LUBOS	OK2 5350	278 820
WOLFGANG B&DRICH	DM 7736/0	230 242
PAUL M&NADLER	USA	189 266
F&R RUCCIO ROSSI	IL 50071	123 428
B&N W&V L&T	NL 4496	68 904
H&L MUT LAST	DM 2164/F	47 256
T. MUSSON	BRS 27262	42 174
HID&KI SAKUMA	JA1 4876	6 148

RTTY DXCC # 26

Plaque number #26 goes to Glenn R. Kuryenknabe, K3SWZ of 403 Centerview Avenue, New Cumberland, PA., 17070. Glenn has contributed on numerous occasions to this article. His long hours at the "green keys" has finally paid off. He started amassing his cards in October of 1970 taking him just short of seven years, a very impressive short time for such an accomplishment.... CONGRATULATIONS GLENN.



"He's ... A ... out to lunch
B ... in conference
C ... out of town
D ... none of these
E ... all of these."

The contest manager also acknowledges with grateful thanks the receipt of check logs from the following stations: DM2BKH, DM2CHD G6JF, G8CDW, SM7MO, W6AEE, W9BT, WA6WGL.

<p>RTTY ID GENERATOR</p> <p>PLUG IN BOARD SAME SIZE AS ST-6 BOARDS. EASY INTERFACE TO ST, DT & UT GEAR. ACCEPTS PLUS 5 OR 12 VOLT SUPPLY. 31 CHARACTERS MUST INCLUDE LTRS, FIGS, SPACE, ETC. SUPPLY DESIRED CODING WITH ORDER, PROM COMES CODED ^{kit} \$34.99</p>	<p>KEYBOARD COVERS</p> <p>W 14 D 8.3 H 3 \$13.50 " 14 " 11.3 " 3 \$14.50 SHIPPING INCLUDED SPECIFY WHITE OR BLACK TOP</p>	<p>10 MINUTE TIMER</p> <p>ADJUSTABLE FROM 1 TO 15 MINUTES. TIME MAY BE EXTENDED. Q OR Q OUTPUTS. REQ. +5V \$8.95 kit.</p>
<p>CW ID KITS</p> <p>AUTOMATIC RESETABLE 10 MINUTE TIMER. SINGLE PLUG IN BOARD SAME SIZE AS DT-600 ID INTERFACING TO ST & DT SERIES TU'S INCLUDED WITH H. V. INTERFACE FOR DIRECT TRANSMITTER KEYING. VARIABLE SPEED OPTION. REQUIRES +5 OR 12 VDC \$37.90</p>	<p>ELECTRONIC PARTS</p> <p>RESISTORS CAPACITORS DIODES TRANSISTORS IC'S SWITCHES CABINETS TRIMPOTS METERS FUSES TEST CLIPS AND MUCH MORE</p>	<p>EXPANDABLE PROTOBOARD</p> <p>IDEAL FOR SMALL PROJECTS \$10.70 ea.</p>
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YOU NEED INFORMATION ON COMMERCIAL RTTY STATIONS? News Agencies, Telex, Weather . . . on shortwave? I have up-to-date frequency, call sign, schedule, code lists. Write for details. Joerg Klingenfuss, Goethestrasse 14, D-7400 Tuebingen 1, West Germany.

MODEL 32 ASR MACHINES FOR SALE. Presently in Telex Service. Available after June 1. Machines located in Springfield, Massachusetts; Knoxville, Tennessee; Baton Rouge, Louisiana; Dyersburg, Tennessee; Grand Rapids, Michigan; Centralia, Illinois; Ardmore, Oklahoma; Salt Lake City, Utah; and Los Angeles, California. You pick up. For more information contact Conrad Jahries, WB7DHJ, (800) 453-5300 and in Utah (801) 484-8631, Interstate Contract Carrier, P.O. Box 748, Salt Lake City, Utah 84110.

ATTENTION FACSIMILE OPERATORS: a list with more than 200 frequencies of facsimile weather stations transmitting on SW is airmailed to you for \$3.00 or 10 IRC. It includes frequency, call sign, name, drum speed and cooperation index of each station. Write to Joerg Klingenfuss, Goethestrasse 14, D-7400 Tuebingen 1, West Germany.

SELL: MODEL 28KSR MARK III. \$250.00. 28 Typing reperfer \$75.00. 28 Page printer \$75.00. LXD tee-dee \$50.00. Type box \$15.00. L.E.S.U. \$10.00. Wanted: R390A dead or alive. Ed Wagner, 1018 Birch Haven Circ. Monona, WI. 53716.

NEWS-NEWS-NEWS-Amateur Radio's News-paper, "Worldradio", Trial subscription - Two issues for one dollar. "Worldradio" 2509-F Donner Way, Sacramento, Calif. 95818

QSL's, CATALOG 30 CENTS. TELETYPE PAPER single sheet rolls 12, 4 1/2 inch rolls per case white, \$25.00 per case plus shipping (case wt. 36 lbs.) N & S Print, P.O. Box 11184, Phoenix, Ariz. 85061.

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M 14 RO chadless printing reperferator 60 WPM sync motor 60 WPM sync motor \$30.00 --WU motor driven keyboard perforator \$15.00 --TT/L-2 Salter PC boards. Nice panel - no cabinet. w/ 170 & 850 Hz bandpass filters \$125.00 Will deliver large machines within 100 miles, otherwise you pick up or pay crating and shipping costs. Wm H. Craig WB4FPK, P.O. Box 311 Grayson, KY 41143.

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DT-600, DT-500, DD350, DI-70 wired and tested units available on high quality commercial boards from the author of the articles in February and March 'Ham Radio'. Only wired and tested units available. For information send SASE to: Robert Clark, 930 Chestwood Avenue, Tallahassee, FL 32303

DOVETRON TELEPRINTER IDENTIFIER TID-100. Mounts inside of all Dovetron MPC Series (and ST-6) terminal units. CMOS circuitry requires less than 1 mil standby and 8 mils functioning. May be programmed for CW, Baudot or ASCII. 128 bit capacity. Two LEDs indicate CLOCK RUNNING and CODED OUTPUT for easy visual verification of programmed code. All four CMOS chips are socket-mounted and programming instructions are etched right on the circuit board. Includes 50 programming diodes: \$34.95 postpaid. Factory programmed with DE and your call: \$39.95 postpaid. DOVETRON, 627 Fremont Avenue, South Pasadena, California, 91030 213-682-3705.

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FOR SALE: Model 28 ASR, three speed dome reperfer \$545.00. Model 28 KSR, three speed \$245.00. Stunt boxes loaded. K6LFM, 1880 Newport CT., Tracy, CA. 98376. 209-835-7633.

PROMS- Pre-programmed 74S288N... (tri-state outputs) are available for the VE3CTP ASCII-BAUDOT/BAUDOT-ASCII converter (Oct 76 & Jan 77 RTTY JOURNAL) . \$3.25 each postpaid, including airmail overseas (set of 4 used). See PROM article this issue. UT-4 components available as before. See prior ads. Peter Bertelli, W6KS, 5262 Yost Place, San Diego, CA 92109. (714) 274-7060.

SALE: ST-6 factory wired. All boards 170,425,850 discriminators, like new, modified for use with UT-4 \$425.00. UT-4, K7WTQ BOARDS AND CABINET, 'perfect', \$325.00. Postpaid. Tom Coit, PO Box 156, Merrill, OR 97633, (503) 798-5497.

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DOVETRON TSR-100 TELEPRINTER SPEED CONVERTER-REGENERATOR is a 6" by 7" PC card designed to mount inside of any MPC Series Terminal Unit and is intended to provide signal regeneration and UP-DOWN speed conversion. The 18 socket-mounted CMOS devices include a Uart, two FIFO Ripple Memories (80 characters), a programmable crystal-controlled Dual-Clock, and a bilateral steering section that permits solid-state switching between Transmit and Receive. All Uart functions including Parity are switch-selectable. Both sections of the Dual-Clock are programmable for 60, 67, 75, 100 WPM Baudot and 110 Baud ASCII codes. All 8 parallel data lines are available at the output of the Memory section. The TSR-100 also offers Variable Character Rate, BLANK Diddle and memory functions of Preload, Recirculate and Reset. The BLANK Diddle is Uart-generated (Tri-state mode) and does not contribute time delay or first character errors. A unique Memory Unload circuit prevents character over-runs and provides a TD Inhibit. A pair of LEDs indicate Memory status. All signal input and output ports are fully buffered for easy interface to other terminal units. Power requirements: +5/+15 volts at 85 mils and -12/-15 volts at 10 mils. TSR-100: \$195.00. POSTPAID Continental USA. Delivery: 30 days or less. DOVETRON, 627 Fremont Avenue, South Pasadena, California, 91030. 213-682-3705.

UT-4 COMPONENTS available as before - see March and April ads. No known source of PC boards at this time. Peter Bertelli W6KS, 5262 Yost Place, San Diego, CA 92109 714-274-7060.

DOVETRON MPC-1000R (E Series) REGENERATIVE RTTY TERMINAL UNIT retains all the features of the MPC-1000/MPC-1000C Terminal Units plus the benefits of the TSR-100 Teleprinter Speed Converter-Regenerator. Front panel controls permit signal speed selection (60, 67, 75, 100 WPM Baudot and 110 Baud ASCII), Memory Functions (Unload, Reset, Preload and Recirculate), and Character Rate Over-ride. Two front panel LEDs indicate the status of the Memory Section (Full or Empty) and the state of the TD inhibit line. The latter is controlled by a unique automatic memory unload circuit that prevents character over-runs even when pulling tape. The BLANK diddle character is generated by the tri-state mode of the UART regenerator and prevents a signal time-delay or first character error on the outputted signal. MPC-1000R: Commercial: \$995.00. Amateur: \$745.00. Shipping and Insurance: \$9.50 Continental USA. Delivery: 30 days ARO. DOVETRON, 627 Fremont Avenue, South Pasadena, California, 91030. 213-682-3705.

DOVETRON'S NEWEST PRODUCT is the TSR-500 SPEED CONVERTER-REGENERATOR. In addition to Signal Regeneration, Up-Down Speed Conversion, Buffer Storage, Variable Character Rate, Blank/LTRS Diddle and Tee Dee Inhibit, the TSR-500 is expandable to 200 characters of FIFO memory and features ERROR CORRECTION. Incorrect and mis-spelled words may be dumped from the Input FIFO without disturbing information stored in the rest of the memory section. A SECOND UART provides local teleprinter copy in the Receive-PRELOAD and Send-RECIRCULATE modes of operation. Both UARTs are the new Intersil CMOS IM6402 and may be programmed for 1.5 character unit Stop Bit in the 5 level Baudot code. Designed for installation within the MPC-1000R Regenerative RTTY TU, the TSR-500 also makes an excellent stand-alone peripheral. Best of all, the price (with 2 FIFOs) is the same as the original TSR-100: \$195.00 Postpaid USA. Additional FIFO storage: \$25.00 per 40 characters. DOVETRON, 627 Fremont Avenue, South Pasadena, Calif., 91030. 213-682-3705.

THE DOVETRON DCM-100 is a poly-phase Direct Conversion Modem employing BASEBAND techniques that completely eliminate the need for input bandpass filtering and channel filters, permitting the error rate to approach the theoretical minimum. A high degree of selectivity is not required in the companion receiver, since this technique also eliminates all the image windows. The Mark and Space channels are both continuously tuneable from 1200 to 3000 Hertz and a dual LED display on each channel permits fast and precise tuning. Full IN-BAND Diversity provides automatic single channel copy during deep selective fades. Auto Markhold, anti-space and anti-CW are standard. FSK and MARK Autostart is offered, and the MARK Autostart is adjustable for Fast or Slow response. The high level loop supply is strappable for either 60 or 20 mil operation. The phase-continuous AFSK tone keyer may be preset with two different Mark-Space-Shift tone combinations, which are operator selectable from the front panel. Rear panel connectors permit plug-in interfacing of the speed-changing regenerators (including the Dovetron Microprocessor and the UT-4). The TSR-200 and TID-100 may be mounted internally. Twenty of the 25 integrated circuits are identical and all are socket mounted. All digital circuits are high noise-immunity CMOS. Availability: January 1977. Amateur list price: \$295.00. FOB. DOVETRON, 627 Fremont Ave., South Pasadena, Ca. 91030.

DOVETRON TSR-200 TELEPRINTER SPEED CONVERTER-REGENERATOR is a 5" by 5" PC card designed to mount inside the MPC-1000/MPC-1000C and HAL ST-6 terminal units. It consists of a programmable UART Regenerator, a programmable Dual Xtal-Controlled Clock and a CMOS Bilateral Steering Section, which provides automatic data and clock switching when the TU is switched between REC and XMIT. Power requirements are +5/+20 at 20 mils and -12/-20 at 5 mils. Availability: Stock. Amateur list price: \$99.50 Postpaid USA. DOVETRON, 627 Fremont Ave., South Pasadena, CA. 91030.

MINI-MANUALS, \$3.95 each postpaid - M15/19 Wiring Hints, Diagrams and schematics. CV89/URA8 FSK Converter data. TDA2 Stelma Distortion Analyzer, AN/SGC-1 AFSK Converter, conversion details, etc. Teletype Gear Guide. Schematic for CV57 FSK TU - \$1.20 postpaid. Technical Manuals, Teletype Equipment and Parts, Surplus Electronics. SASE for lists. Jim Cooper, W2BVE, POB 73, Paramus, NJ 07652.

HAL COMMUNICATIONS CORP. announces the DS - 3000 and DS - 4000 series of KSR Video Display Terminals for Baudot and/or ASCII code. Offering error correction capability, multi-speed operation, and 16 lines of 72 characters per line, these terminals employ the 8080 microprocessor in what we believe is the first microprocessor based product offered to the amateur radio communications market. Request data sheet for full information. HAL COMMUNICATIONS CORP., Box 365RJ, Urbana, IL 61801. Phone 217-367-7373.

HAL COMMUNICATIONS CORP. announces the ST-5000 Demodulator/Keyer. Housed in an attractive blue/beige cabinet, the ST-5000 provides excellent performance at moderate price for HF and VHF-FM operation. Active discriminator filters and detectors assure wide dynamic range. Autostart operation, switchable wide narrow shift, and switchable normal/reverse are some of the features provided. The audio keyer generates stable, phase coherent audio tones for each shift. The ST-5000 has a self contained loop supply, and also generates RS-232 data levels for use with HAL electronic TTY video display equipment. \$275.00 postpaid. Write or call for further information, HAL Communications Corp., P.O. Box 365, Urbana, Illinois 61801, 217-367-7373.

HAL COMMUNICATIONS CORP: Headquarters for electronic RTTY equipment. In demodulators, choose from the incomparable ST-6 or, for a low cost beginning in RTTY, the ST-5. Tailor either to your requirements by selecting the 425 Hz press discriminator, the XTK-100 or AK-1 AFSK oscillators and the ST-5AS autostart for the ST-5. Full details available in our current catalog. Compare before you buy. Bank Americard and Master Charge plans available. HAL COMMUNICATIONS CORP., Box 365RJ, Urbana, Illinois 61801. Phone 217-367-7373.

UT-4 COMPONENTS available as before - see March and April ads. No known source of PC boards at this time. Peter Bertelli W6KS, 5262 Yost Place, San Diego, CA 92109 714-274-7060.

PRESCALER KITS good to 300 MHz complete with all componets. Has post-amp for better sensitivity board measures 1-1/2 x 2 inches will fit inside most counters.

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PRINTED CIRCUIT BOARDS: RTTY SELCAL with TTL logic, (73 Magazine, November 72) \$12.00. ST-5A-W/PS (2 boards) \$6.25. AK-1, \$4.25; CW ID'er (Feb 73, 73 Magazine) \$4.75. Logic probe (Dec. 74, 73 Magazine) \$1.00. Autostart RTTY encoder and decoder (Jan. 67, 73 Magazine) \$11.00. Synthesizer - 75-S Collins Rec. (Dec. 75, Ham Radio) 2 boards \$12.50. Instructions and parts list included. S.J. Zalewski, 29307 Red Cedar Drive, Flat Rock, MI 48134. (313) 782-9316.

HAL COMMUNICATIONS CORP. announces the MCEM-8080 microcomputer. The MCEM-8080 is a complete operating system on a single PC board, including serial I/O at RS-232C levels or 20-60 ma current loop, 3 parallel I/O ports, 1024 bytes of RAM, 1024 bytes of ROM containing the system monitor program, and switches and indicators to manually control all bus and control lines. The powerful 8080A CPU and its family of chips are used. The system monitor allows the use of either Baudot or ASCII terminals, and enables the user to load hex files, dump or display memory, insert data in memory and transfer program control to a specific location. Whether you are a RTTY operator turned computer hobbyist, or a computer hobbyist turning to RTTY for a communications link, the MCEM-8080 should be your choice. Write today for full details. HAL Communications Corp., Box 365RJ, Urbana, Ill. 61801. Phone 217-367-7373.

ELECTROCOM SERIES 400 FREQUENCYSHIFT CONVERTERS are now available to the amateur. Outstanding performance, high reliability and quality construction, for which Electrocom equipment has been known for more than 17 years, is maintained by conservative design and quality componets throughout. The Model 400 contains continuously variable shift which is adjustable by a 10 turn front panel control. Shift is accurately displayed by an in-line 3 digit readout. A range switch selects high or low tone combinations allowing use on both SSB and AFSK systems. The Model 402 contains individual Mark and Space frequency controls. Matched filters, baud rate selection, and precision linear detectors provide optimum demodulation. Input frequencies over the range of 1000 to 3200 Hz. are accepted. Other features include autostart, mark-hold, antispacer, waveform symmetry corrections, solid state motor switching and adjustable bias correction circuitry. The loop supply is variable from 20 thru 60 mils. and maintains constant current over a wide range of loop resistance and line voltage. The 2 inch CRT tuning indicator/monitor contains automatic intensity control and blanking. Direct factory introductory price range \$690.00. FOR complete details and specifications write or call Electrocom Industries, 1105 N. Ironwood Drive, South Bend, Indiana 46615 219-232-2743..

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SPECIFICATION SHEETS for Teletype Corp. modification kits and equipment installation. Generally \$1.95 to \$2.95 each depending on size. Order by stating exact modification kit number, or equipment model number and function. Send SASE for flyer sheets--TTY, FAX, TM's, electronics. Jim Cooper, W2JC, PO Box 73, Paramus, NJ 07652.

MODEL 28ASR MkIII, like new with manuals, \$550. Collins 55G-1 preselector, new and unused, \$350. Ron Ott, (W6XY), 528 Bonita Avenue, Pleasanton, California 94566.

WANTED: Information for Northern Radio FS Diversity Converter type 174, Model 3. WA4WDX, 8135-33rd Ave., no. St. Pete, Fla. 33710.



"Could you fix it so that the girls don't have to kick it so often to keep it operating?"

21

FOR SALE: Complete set of reprints of the RTTY JOURNAL. Volume #1 to date. These are in book form same as originals. Brand new mint condition, ideal for the person who wants to know all about RTTY. Price complete including shipping, \$125.00. Ralph H. Wilson, 4011 Clearview Drive, Cedar Falls, IA, 50613. WBØESF.

COMPLETE T.U. and 'AFSK' generator on one board with RM-300. On board C.W. I.D. with PROM. This modem is ideal for FM repeater use. High stability. Premium quality board. Requires plus 5v., plus 12 v., loop supply. Documentation \$2.00 - RM-330 Board just \$21.25. Complete RM-300 kit (less PROM) \$71.25 - P.R.O.M. programmed with your call in either CW or baudot only \$7.00 - Calif. residents add 6% Postage and handling \$1.00. Eclipse Communications, 5 Westwood Drive, San Rafael, CA. 94901.

SALE: Model 28ASR friction complete with TD and keyboard perforator \$400. With reperforator \$460. Model 28KSR friction \$200. Model 28 stand alone typing reperf with keyboard \$175. All above completely rewired and ready to plug in. Bill Parker, 984 Amelia Ave., Akron, Ohio 44302.

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DOVETRON



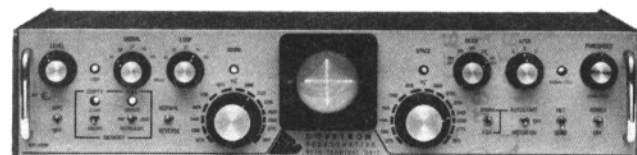
MPC-1000C
Multipath-Diversity
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The MPC-1000C features MULTIPATH CORRECTION, IN-BAND DIVERSITY (single channel copy during deep selective fades) Operation and a PHASE-CONTINUOUS AFSK TONE KEYS. The Mark and Space channels are CONTINUOUSLY tuneable from 1200 to 3100 Hz. The internal RY GENERATOR and DUAL-MODE AUTOSTART (FSK or MARK) are standard, as are rear panel provisions for SIGNAL REGENERATION and SPEED CONVERSION peripherals.



MPC-1000CR
Signal Regeneration &
Up-Down Speed Conversion
Amateur Net: \$595.00

The MPC-1000CR combines all the features of the MPC-1000C with the TSR-200 SPEED CONVERTER-REGENERATOR. A front panel SIGNAL SPEED switch provides electronic "gear-shifting" between 60, 66, 75 and 100 WPM speeds. All incoming and outgoing signals are regenerated by a CMOS UART and a crystal-controlled DUAL-CLOCK to less than 0.5% bias distortion, providing an extremely low error rate on weak and badly distorted signals.



MPC-1000R
Dual-Uart Regeneration,
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The MPC-1000R combines the features of the MPC-1000CR with the TSR-500 SPEED CONVERTER-REGENERATOR and offers 200 characters of FIFO MEMORY, a DUAL-UART REGENERATOR that also provides local copy during all PRELOAD-RECIRCULATE functions, a WORD CORRECTION circuit that permits an incorrect word to be erased from memory by depressing the local keyboard's BLANK key, VARIABLE CHARACTER RATE and automatic BLANK/LTRS DIDDLE. Character OVER-RUN during down-speed conversion is prevented by an automatic CHARACTER RATE OVER-RIDE and TEE DEE INHIBIT circuit. Three preset AFSK TONE/SHIFT combinations are selectable from the front panel.

The MPC-1000R (80 characters of memory), MPC-1000CA (Tri-tone AFSK), MPC-1000CRA (Tri-tone Regenerator) and MPC-1000CS (Crypto-Scrambler) are also available.

Your QSL will bring complete specifications, or call: 213-682-3705.



627 Fremont Ave.
(P. O. Box 267)
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