RTTY Journal

MARCH 1980

VOLUME 28 NO.3

75 CENTS

EXCLUSIVELY AMATEUR RADIOTELETYPE

CONTENTS

RTTY JOURNAL

Dee Crumpton
Editor & Publisher
P.O. Box RY
Cardiff by the Sea,
California 92007

THE RTTY JOURNAL IS PUBLISHED
10 TIMES PER YEAR. MAY-JUNE &
JULY-AUGUST ARE COMBINED.

Second Class permit
Encinitas, CA 92024

Business Offices
1155 Arden Drive
Encinitas, CA 92024

POSTMASTER SEND FORM 3579 to Post Office Box 179 Cardiff, CA 92007

SUBSCRIPTIONS AND ADS ARE CASH IN ADVANCE-NO BILLING

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

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FROM
THE
MAILBAG

RAFFLE

The San Diego Teleprinters Society held their annual raffle. The grand prize winner of a model 28KSR was Chris Tyberg,WD6DNW. Chris was using a Kleinschmidt so the model 28KSR was most welcome.

APPLE USERS NET

Apple computer users have a SSB net Meeting on a frequency of 14.330SSB at 1500 GMT.

RTTY MASAT NET

Charles Martin,AB4Y is starting a RTTY AMSAT net. They will meet on Tuesday nights at 0230 UTC on 3620MHZ The net will use 170 HZ shift at 60 WPM. AB4Y will act as net control.

WARNING

"Some" TRS-80 users who have the TR-80 cassette recorders have experienciedproblems. The CTR-80 recorder in some cases ruined prerecorded tapes. The word I get is that Radio Shack will do a free fix. If you have any doubts have your unit checked. Ruining software can be expensive.

QSL STAMP

Loren Carlberg,WB5WD6 has come up with a fine idea. Loren would like to see a new 31 cent U.S. air mail stamp created. The stamp would commemorate Ham Radio. He suggested a "Peace Over All The World Thru Amateur Radio Fellowship" theme. This looks like a "natural" for the ARRL to accomplish.

QST

In the January issue of QST page 91 you will find a perforated page. The front side is Amateur frequency and mode allocations and on the reverse side is a calandar of events for 1980. This is a great idea and makes it easy to remove and refer to during the year.

CES

The midwinter consumer electronics show was held in Las Vegas, Nevada. It is impossible to write about all of the exhibits. I will try to give you a small insight into this very fine show. The reader may dismiss the following as "expensive toys", science fiction or even imagery of the movie 2001. I hope to leave you with the feeling that you looked into the window of the future.

The crowds od comsumers and retailers alike soon got the idea that voice operated equipment was becoming a reality, push button appliances will soon be replaced by voice operated units. Let us examine just a few.

A microwave oven with a limited vocabulary of its own was displayed by the Quasar Company,Asking price $600.

A talking watch was displayed by the Windert Watch Company. The watch will be available in late 1980 with a tag of about $100.00.

The Toshiba Company showcased a voice operated TV set. The user will be able to issue voice commands to change channels,sound etc.

In the first two examples we find equipment that talks only. The microwave tells you that the roast is done the watch gives you voice time read outs. The third example , the TV set, will not only accept voice commands but will speak. The set will acknowledge your command, change to channel 9 by saying OK. The set if it fails to understand will say "repeat". The talking technology appears to have started with the Texas Instrument Company'. They introduced in 1978 the "Speak and Spell" microcomputer game. This game prerecorded the vocabulary words which in turn were divided into bits of information. The computer could now recognize,store and reassemble the bits of information.

Listening and speaking devices are presently being used in commercial and industrial applications. The price tag is about $40,000 putting the cost well beyond the "normal" household budget.

Several firms are working on break thru technology. IBM and several California based companies are optimistic about the potential of voice operated systems. The price tag of the three examples is a start in the direction of making systems available to the average comsumer.

The approach at this time is to have a central command module. It would act as a clearing house for your voice commands. This woulf allow handicapped people to control appliances with just their voice. This also allows them to become productive again.

The problem of price will soon be diminished but several other problems remain. The present state of the art only allows the prerecording of a limited vocabulary. The need to pause between each word or small group of commands is required.The voice print is very sensitive to your voice condition. A cold or sinus condition causes voice recognition problems.

The home computer user is aware of Apple Talker and the Votrax system for the TRS-80. This is an example of what is going on the market now. The super "Talker" for the Apple II is available for $279.00 and the Votrax system for the TRS-80 for $399.00 This allows the home users to program their computers to respond to the spoken word. The computer will perform any task upon recognition of a key word.

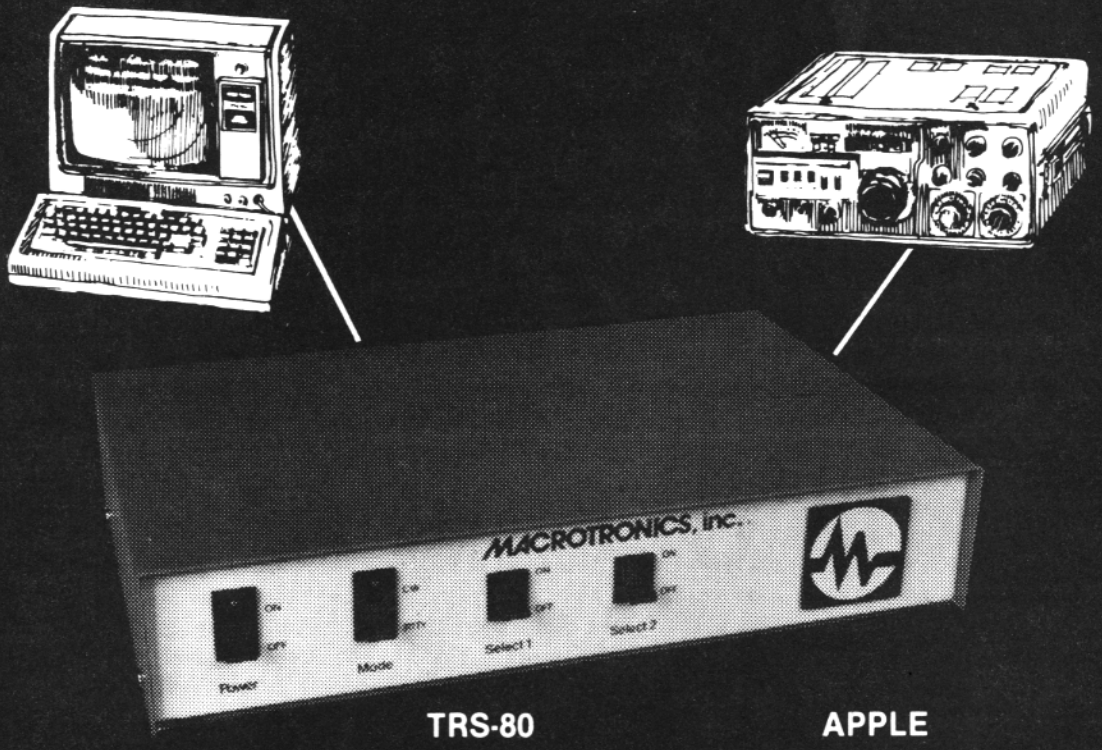
You the reader can now see what fun it is to look thru the window of the future. I hope you had your imagination stirred like mine was. I wonder how far away we are fron voice RTTY? The user receives copy and voices his answers back. The computer converts his/her voice to Baudot and sends it out over the air.

ASCII

The input I have received on VHF ASCII is as follows: The baud rate should be 1800. Deviation from the mark signal to the space signal should be extended to 1000 Hz for A2 and F2 emissions in the VHF and UHF spectrum.Synchronous transmission

cont on page 13

TRS-80, PET, APPLE, SORCERER
Ham Interface Systems



TRS-80

☐ **CM80** Send/Receive CW & RTTY in cabinet as illustrated **$279**

☐ **M80** as above less cabinet **$149**

☐ **M800** adds advanced RTTY (split screen) to CM80/M80 **$99**

PET

☐ **M650** Advanced RTTY (split screen) & CW in cabinet as illustrated **$210**

☐ **M65** Send/Receive RTTY & CW (cabinet **not** included **$129**

APPLE

☐ **A650** Advanced RTTY (split screen) in cabinet as illustrated **$210**

*Advanced CW(split screen) available soon!

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RTTY-DX

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714-276-3182

Greetings to all.....

In last months column I mentioned that I would have more on the WRU operation on the autostart frequency of 14,082.5KHZ. Unfortunately, I have not been able to get one going as of yet and will not be able to for several months to come. The access code for most HF operations is as the following:6CYAZW and drop your carrier and the accessing station if on the air will come on and identify via RTTY, that he is listening.

The latest autostart directory for the 14082.5KHZ net shows 23 members and is growing each and every day. Most of the users have the H8 computer system or are in various stages of building up systems.

Check the W1AW bulletins as it has been reported that FCC has released the date for authorized use of ASCII on the ham bands. It has long been awaited by many US Hams. Now that it is becoming a reality, I wonder how much activity will crop up from it? From what I have heard, I think that VHF and above will see most of the use due to wide signal requirements that are needed. Watch for new bandpass filters for the ST6 DT600 etc.

Al Cooper, WA6QFN, who has operated from various parts of Southern Africa as T4AHC, 3D6AD, S*AHC, will be leaving Africa in March and requests all correspondence be sent to his QSL manager,Mas Sev at 6430 N.Lakewood Ave.,Chicago,IL 60626.

HI8XDF will go QRT in April. If any one needs HI on RTTY they better find Tony or his XYL HI8DXJ and ask them to QSY to RTTY.

DF9MP/EA is active from Spain now QSL via DL bureau.

HP1XAW QSL via K1RQ.

Gene VA9PP is active again.

Here is a partial listing of callsigns printed in the past few weeks: OX3CO,XT2AV,OK3VSZ,CT4IA,WAOVNY/KL7, YV2IN,XE1ARR,PZ1AP,EA8RP,EA8JP,X33XB, 9H1FA,9H1ET,HL9UN,GJ3FKW,VE8NI,FM7WB, ZX1XR,ZE1CE,ZS2LR,UT5RP,TI2HP,GD4IHA, and DU1POL.

On the WAS most wanted list N1CB, Carl in Newport,NH is active from time to time. K1LPS,Larry in St. Johnsbury,VT has been very active. WB1DHJ,Conrad is in Salt Lake City, Utah,Also K7JH,Jon is in Salt Lake City. WAOHHI is on in North Dakota, and Frank,WA8VRS is active fron West Virginia. AC3U Graham, is active from Delaware, so as you can see most of the impossible states do have Hams that are operatinf from them.

The DXCC honor roll was printed in January, and again we missed some of the prominent RTTY DX'ers. In an attempt to reduce the missing of these people I will print everyone that submits, unless they do not update once a year at which time I will drop that station from the listing. If you wish to be placed on the next DXCC honor roll listing,please drop me a line giving me the number of countries that you have worked and the number that you have confirmed from the ARRL Countries list and I will publish this in the July/Aug issue of the JOURNAL.

See you in the B.A.R.T.G.next month

73 for now de "Skip"

RESULTS 9th SARTG 1979 RTTY CONTEST.

Single Operator Class "A"

1. I3FUE 408,120 points.
2. W3EKT 295,800
3. SM6ASD 262,500
4. IT9ZWS 258,500
5. DJ6JC 258,240

Multi-Operator Class "B"

1. I5MYL 341,040
2. LZ2KRR 189,240
3. UK4FAD 182,115
4. G3UUP 176,175
5. DM3GM 156,375

SWL Class "C"

1. G8IZD 209,475
2. DM-7481/B 180,225
3. DL-005 1694785 142,740
4. 16-10977 134,400
5. DL-A36/ 158337 96,205

The 10th SARTG World-Wide RTTY Contest will be held August 16th and 17th,1980.

HAM HELPS

Don Coltart,WA1LKM c/o Standard-Knapp Inc. POB 313,Portland,CT 06480. writes that he has acquired a Teletype Model 32 ASR and wishes to set it up on the Ham bands,Don is looking for parts lists, service manuals, schematics and any required conversion that will be needed. He is using a Swan 500 transciever.

KONTEST KORNER

Giant Flash 9-10 March 80 (Europe and Africa)	Oct 79
B.A.R.T.G 22-24 March 80	Feb 80
***** 19-20 April 80	Mar 80
VK/ZL/Oceania 16-17 June 80	coming
SARTG 16-17 August 80	coming
CARTG October 80	coming
WAEDC November 80	Coming

AWARDS SECTION

DXCC # 44 dated 10 Feb 1980
DJ3OE Herbert Werry
Saturnweg 18,4056 Schwalmtal 2
Federal Republic of Germany

W.A.C. all on 20 meters 11 Feb.80 #81
Bill Gosney,WB7BFK
2665 N 1250 East (L-M acres)
Oak Harbor, WA 98277.

W.A.C. Mixed Bands 1 Feb 80
Ludwig Andes,DK7UC
Kaiserstr 12A,D6750 Kaiserslautern 23, West Germany.

W.A.S. all on 20 meters 1 Feb 80
Karl "Skip" Prinsen,WB6CYA
3611 Merrimac Avenue
San Diego, California 92117.

1st Spring BARTG VHF/UHF Contest.....

1. DURATION: 1800 GMT Saturday 19th to 1200 GMT Sunday 20th April,1980
2. BANDS: 144MHz and 432MHz, cross band and contacts via a repeater or satellite will not be valid.
3. OPERATORS: Licensed amateur radio stations within zones 14 & 15 permitted to use RTTY.Port.operation allowed. See next month for more...

COMPUTERIZED RTTY

INCREASE YOUR RTTY OPERATING PLEASURE WITH THE BTA-1 MICROPROCESSOR CONTROL CENTER FROM MS COMM—THE COMPUTER CONTROL PEOPLE SPECIALIZING IN AMATEUR RADIO PRODUCTS.

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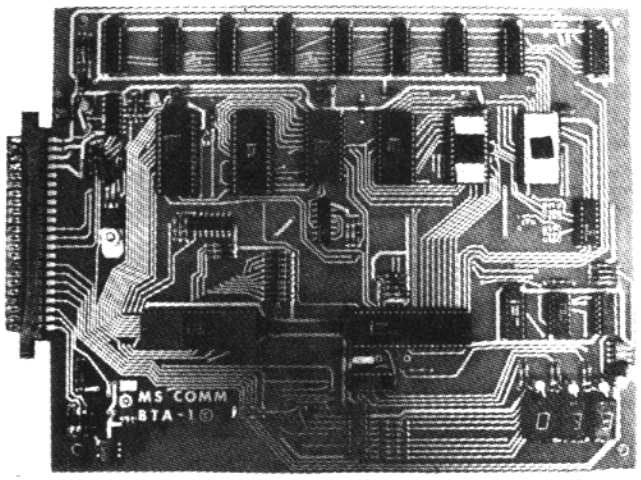

- **UTILIZES STATE-OF-THE-ART** 8085 MICROPROCESSOR DEVICES
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- **AUTO ID**—SENDS YOUR CW ID UPON DEMAND, OR EVERY TEN MINUTES WHILE YOU'RE ON THE AIR
- **CANNED MESSAGE CAPABILITY** ALLOWS INSTANT RECALL OF 165 CHARACTERS. MESSAGE IS ENTERED FROM YOUR KEYBOARD AND A FLIP OF A SWITCH PLACES THE ENTIRE MESSAGE ON THE FIFO FOR TRANSMISSION—ELIMINATES "RY" TEST TAPES AND EQUIPMENT OR PIX LISTS
- **LED DISPLAY** INDICATES AVAILABLE INTERNAL BUFFER SPACE
- **'SELCAL' AUTOSTART CONTROL**—YOUR PRINTER REMAINS OFF UNTIL A PREDETERMINED FIVE CHARACTER SEQUENCE IS RECEIVED
- ALL FUNCTIONS ARE SWITCH CONTROLLED
- **CUSTOM FEATURES AVAILABLE**

The BTA-1 accepts FSK voltage level input available from most amateur terminal units and interfaces either 20 or 60 mA RTTY loops. The BTA-RTTY control unit is available in kit form with quality 8" x 11" PC board and complete instructions. A fully assembled and tested unit is also available. Power requirements are +5, +12 and −12 Volts.

Send us your QSL card for additional information about the BTA-1 and other microprocessor amateur products.

Ms Comm

—THE COMPUTER CONTROL PEOPLE

Box 225 Greenfield NH 03047

RTTY Journal
VHF
RTTY NEWS

Mike Stone, WBØQCD

P.O. Box H, Lowden, Iowa 52255

Spring is almost here! Lots of VHF RTTY NEWS this month. KA8BQH, Tammy Abernethy of North Canton, Ohio is the "official winner" of the announced December 1979 "VHF Holiday RTTY Art" contest. Congratulatons Tammy! The winning entry was a "Santa Claus" in his sleigh being pulled by a reindeer. Some overlining techniques were ed and the entire taping was designed for "Listening on 145.75 anybody arounf?" The winning material was relayed on the VHF circuit by WD8MBQ, Ike also from North Canton. A years subscription of the JOURNAL has been awarded to Tammy from publisher Dee. (publishers note:Tammy is 20 years old and has a sister 14 also an amateur. We will all see your entry on the December cover of the RTTY JOURNAL). Thanks to all of the others that entered, better luck next year.

From G8APB, Chris Plummr of England comes word of the 1st Spring BARTG VHF/UHF Contest see RTTY DX Kontest Korner for details.

A number of you have written for information on acquiring ST6 type demodulator kits to build from scratch. Two excellent sources are available by reputable companies; ST5 type demodulator kits, including motherboard interface, autostart and AFSK, are available from MEG, Inc., POB 341, Galesburg,Illinois 9send for catalog) ST6 type demodulator boards,set of 170/850 shifts or 170/425 shifts are available, including an improved power supply circuit with detailed parts listing and instructions. Additional boards are available for "AK-1"(AFSK), board #7 is an amplifier-power supply for a tuning scope using a 2AP1 or 2BP1 scope tube. Board #8 is a CW ID generator. Boards are from Ham Radio, Jan 1971,Feb.1969 QST,Oct. 1971 Ham Radio, Feb, 1973 73 Magazine respectively. All boards are 3.8" by 5" on G10 glass epoxy. They plug into 15 pin edge connectors with all boards except the CW ID board being single-sided. All boards are tinned and drilled and cost $4.00 each pp. Write "R-Tronics, 126 Church Street, Fairfax, IA 52228. (KOQVF).

Attention SWTP-6800 owners, K6AEP, Clay in San Jose, Calif. has his system running RTTY and SSTV including taking ATV pictures and converting them from video information to digital information with hard-copy Baudot output! Clay has written many software programs and has had many articles published in Ham Radio, 73 Magazine and various computer journals. Those 6800 owners or interested persons desiring to form a "6800 Computer Net" on 14 Mhz. contact Clay at: 1758 Comstock Lane, San Jose, CA 95124. An excellent publication for "6800" buffs is "6800 Microjournal, Box 847, Hixson, Tenn.37343 at $14.50 per year. While we are on computers TRS-80 owners can get an excellent SSTV keyboard program from WA7WOD, Sam in Utah or WA4OAA, Steve in North Carolina. KOQVF, Dick in Sioux Falls, SD, advises he still has a limited quantity of "Infotech M-70" Baudot/ASCII code and speed converters left. A request from WOMNH, Dr Leonard Sorg in Kansas for the address of Gary Buda, WAONDN for obtaining copies of the RTTY JOURNAL Biblio", as mentioned in my January column is:8212 Douglas Drive, N. Brooklyn Park, MN 55443 I completed the listings of RTTY articles published in QST, 73, CQ and Ham Radio magazines and forwarded to Dee. Watch for them! Two-meter VHF RTTY saw a lot of DX activity on December 27th and 28th. Many east coast and midwestern states communicated during the 47 hour period.Nine states were copied at this QTH at 146.700 Mhz, including, WA8KCZ,W8SFK,WA9TUG, WD9BCF,WD8CEB,K8CEB,K8CJQ,WB9SPT,KOVM WB9OTW and KOFXM. WA9LRO RTTY Repeater at Gridley,Illinois got its bit of extended use as did WR9ACY at Indianopolis. "ACY" voice users wondered what all those "crazya' tones were Even copied an "8"-land repeater with "walter Cronkit"commercials! Had a nice conversation with KOPFX and WBOARJ in St.Louis and WB9YMV in Congerville,Illinois all reporting heavy VHF RTTY traffic. Bi-State VHF Teleprinter Society is back on the air with WBOSAX/RPT now located at new site in Blue Grass, Iowa, while WB9WIC/RPT in Chicago continues to wrap up members in their CARRS group. WA4Gic/R (formerly WR4ARD) up and operating in the Winston-Salem, NC area. Cedar Rapids, Iowa RTTY group using 146.46 Mhz, as well as 146.700 and several members playing with new TRS-80 computers. K9SLQ have you gotten any answers yet??

STRAYS

Want to check out that ASCII machine, computer or code-converter on the air? Tune in at 14.078 Mhz. at 2130 UTC on Sundays and listen for ASCII transmissions immediately following the Baudot update from CARNS-Canadian Amateur Radio News Service in Canada. AE5X, Joe Kallina Jr. in Garwood, Texas needs help getting his Teletype model 33 printer hooked to his Dovetron demodulator with matching code translator unit. Send help to Joe at POB 365-Zip 77442. With crystal-controlled AFSK tone output becoming more popular, included is a "mini-review" of a circuit I recently built up that is well worth the money spent. AB4Y, Charles Martin POB 3370, Bowling Green, KY 42101 wants to get a Tuesday night net going on RTTY aat 3620 MHZ for AMSAT/RTTY users and discussion of the new PHASE III launch operation scheduled for May 30th at 1200-1700 UTC. Let's hear from those running "Satellite RTTY". K5ZMS,Ray still fighting for removal of wideband FM use on all of 6 meters

c'nnt. on page 9

Classified Ads

30 WORDS $2.00 ADDITIONAL WORDS 4¢ EACH -CASH WITH COPY-DEADLINE 1ST OF MONTH FOR FOLLOWING MONTH.

WANTED: TELETYPEWRITER PARTS and assemblies for Teletype,Kleinschmidt and Mite Corp. machines. Phil,W4LNW, POB 70, Morrisonville,NY 12962.

TELETYPE MACHINES AND ALLIED EQUIPMENT. SASE FOR LIST. MODEL 28 THREE (3) SPEED RECEIVE ONLY $250.00. Model 28 ASR, REPERFS,PERFS, TD'S,ROTR'S, MODEMS TWX'S,TELEX'S,ETC.ANTIQUE TELEGRAPH INSTRUMENTS. GOODMAN,5454 SO. SHORE DR.CHICAGO,60615.312-753-8342.

NEWS-NEWS-NEWS-AMATEUR RADIO'S Newspaper "WORLDRADIO".Trial subscription Two issues for one dollar. WORLDRADIO 2509-F Donner Way,Sacramento,CA 95818

"RTTY AWARD HUNTERS" 73 MAGAZINE announces the most comprehensive awards program going! Over a dozen separate awards recognizing all bands and modes for DX and domestic achievements. Full details appear in the September, October and December 1979 issues or SASE to:Bill Gosney,WB7BFK,2665 N. 125) East,Oak Harbor,WA 98277.

TELETYPE SUPPLIES, TECHNICAL MANUALS, equipment.11/16" and 7/8" perforator tape. Page paper.New ribbons.Teletype Corp.maintenance manuals.Let me know what you need. Send 75¢ postage for the 3 current catalogs.Jim Cooper,W2-JC/W2VE, Box 73 Paramus,NJ,07652.

TELETYPEWRITTER GEARS,PARTS,RIBBONS, tools, manuals,supplies,also toroids. List SASE Typetronics,Box 8873, Ft. Lauderdale,FL 33310.Cash or trade for unused repair parts,components,klystrous, and military connectors.

SURPLUS TD PAPER YELLOW AND OILED.. 11/16 carton of 10 $3.00,Wt 13 Lbs. 11/16 carton of 40 $10.00,Wt.47 lbs. 7/8 carton of 8 $3.00,Wt. 13 lbs. 7/8 carton of 32 $10.00,Wt.47 lbs. Add UPS WT.,Harmon, 5628 10th Ave., S. Birmingham,AL 35222.

28 KSR RARE 3 SPEED GEARSHIFT,Communications keyboard all wired for loop $300.00. HAL ST6 TU with UART (switchable in/out of line & 60 and 100 WPM) and AK-1 AFSK.Optional XTK-100 crystal controlled AFSK board. $300.RTTY FSK/AFSK CW IDer with timer,all assemblied in Dosey "E" cabinet $50.Delivery within 200 miles,WHOQCD,Mike Lowden,Iowa 319-944-5421.

Model 33 RO'S LESS STAND AS IS.Used/checked on line prior to shipment $250 total, shipped prepaid,anywhere in continental USA.With stand $265. W/RS 232 installed $300 while they last.Please specify 20 or 60 MA service.All units checked for major (visible) wear.Model 33 manuals $20 per set volume 1,2 and parts.Paper $30 per case of 12 rolls.Ribbons$17 per one dozen box. Please send certified check or money order.Many supplies and various terminals as is and rebuilt.Parts are also available.Please write or call for lists.Tom Marriott, TRAM TELETYPEWRITER SERVICE,58 E.Elm St,Central Islip,NY11722,516-582-9787

MODEL 28 ASR WITH KEYBOARD PERF and TD $350.For reperf instead of perf add $50.Model 28KSR $175.For answer back add $50.For 60-75-100 gearshift add $100.Model 28 reperf with 60-75-100 gearshift $150.For keyboard add $50.Model 28 reperf with keyboard (no gearshift) $150.Model 28 LXD stand alone TD $100.Model 35RO (ASCII) receive only in 28 cabinet with power supply $200.All equipment rewired and ready to plug in.FOB Akron,OH,Bill Parker K8NCV,984 Amelia Av,Akron44302

RM-300 THE COMPLETE TU AND AFSK generator on one board.Your CW ID generated from on board PROM.Thinking of VHF RTTY through your local repeater? This premium quality is ideal.Complete documentation $2.00.RM-300board just $21.25.Complete kit (less PROM) $71.25.PROM programmed with your call $7.00.RP-400 power supply (+5v &-12v and dual loop supply) board only $21. 25.Complete kit with heavy duty transformer and solid state auto start telay $71.25.Cal residents add 6%. Postage and handling $1.00.ECLIPSE COMMUNICATIONS,5 Westwood Dr.,San Rafael,CA 94901.

FOR SALE:MOD 35KSR EXCELLENT Condition.Pick-up only $400. 714-276-3182. Skip,3611 Merrimac,San Diego,CA 92117

WANTED M28 SPROCKET FEED MACHINES. State quantity and condition in first letter.Skip,WB6CYA,3611 Merrimac Ave. San Diego,California 92117.

WE"SPECIALIZE" IN RTTY EQUIPMENT AND supplies.Authorized DEALER for the fabulous "INFO-TECH" RTTY/CW/ASCII equipment, including models:M-100E Tri-mode video converter, M-200E Tri-mode video converter,M-300C Tri-mode keyboard,M-70 RTTY and ASCII code/speed converter. Also transcievers, amplifiers, antennas and other general Ham radio equipment. Call Dick, KOVKH, 605-343-6127 for special quotes on all of your equipment needs. Dialta Amateur Radio Supply, 212 48th St,Rapid City,SD 57701.

WANTED SKIN TIGHT M-28 R/O OR KSR, this was made for the USAF.Wanted all parts for sprocket or pin feed for M-28. For Sale: IBM Selectric 731 BCD excellent condition $300,three spe M-28 typing reperf, excellent condition $175.M-28 TD also excellent condition $150, both together $300. Near new M-28 perforator 100WPM with keyboard and cabinet $100.Older M-28 TD in good condition $75. Cecil,W7VKO, 602-955-9393. 3109 E.Roma,Phoenix,AZ 85016.

TELETYPE 43 KSR RS-232 $999.95 Factory new postpaid USA,DATA MART, 914 Waverly,Arlington Hts.,IL 60004. 312-398-8525, 6-11 PM CST.

ASR-33 WITH STAND, 4 ROLLS PAPER, 10 rolls tape. Completely serviced by Teletype Corp. Nov 79. $600 complete. You pay shipping. Pick-up prefered. Steve,N3SL/0, 1525 S. Lansing,Aurora, CO 80012, 303-752-3768.

FOR SALE:XITEX SCT-100 ASCII/BAUDOT/Video microcomputer terminal, perfect $150. MRS-100 Microcomputer CW/Baudot/ASCII code transciever, in cabinet, new $200. For combination sale I will include broad banded modified 12" TV (solid State) at no charge.MS-6 CW ID system (NuData),with 10 minute timer $25.WBONSJ,Larry,Rte.1,Box 17 Sunrise Beach, MO 65079.

WANTED: MODEL 26 TELETYPE, WORKING or not(with synchronous motor only). State price and condition. Richard R. Peterson,WA6NUT, 657 Circle Drive, Santa Barbara, California 93108.

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ATTENTION COMPUTER OWNERS-PROGRAMS needed for TRS-80,Apple,Pet,Etc. Create at home in your spare time. We need programs for education (preschool up),household aids, utility programs,games programs for Amateur Radio,for small business,etc. Unlimited earnings! Write for details: Bill Gosney,WB7BFK,Micro-80 Inc.,Division of Software International,2665 N.1250 East,Oak Harbor,WA 98277.

THOUSANDS OF COMMERCIAL RTTY Stations are active between the Amateur shortwave bands. Many of them can be print ed easily with your existing equipment.(Take care of legislative restrictions if applicable!) If interested, you need "software", complied from nonstop monitoring the complete shortwave spectrum. I do have up-to-date frequency, callsign,schedule, code lists for press, military, diplo telex, aeronautical, weather,etc. stations. Write for details. Joerg Klingenfuss,PANORAMASTRASSE 81 D-7400 Tuebingen 7, Fed.Rep.Germany.

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FOR SALE: RTTY DEMODULATOR, designed especially for the reception of short wave RTTY signals with various types of speeds and shifts. The PPL circuit is adapted automatically to the shift of the station received! Printing usual stations like press, military, amateur, diplo, weather, aeronautical telex, maritime, etc., is rather easy with this LED-controlled unit. Features:switchable audio filter;autostart relay;power supply 220 V AC 50 Hz;outputs:loop supply for mechanical RTTY machine, and/or TTL-compatible for VDU. Price, including packing and surface mail postage to anywhere in the world, DM 420.00 or $240.00. Some more information is airmailed to you for DM 5.00 or $3.00, this amount is credited on the final price of the unit if you ordered later on. Joerg Klingenfuss, Panoramastrasse 81, Hagelloch, D-7400 Tuebingen 7, W.Germany

FOR SALE: 4th edition of the "LIST OF RTTY STATIONS IN FREQUENCY ORDER", now contains more than 2800 frequencies of commercial stations like press, aeronautical, weather, telex, military, diplo, maritime, etc. on shortwave. Schedules of around 100 news agency stations are also included. This offset printed list is airmailed to you for $15.00 or 39 IRC from Joerg Klingenfuss,Panoramastrasse 81,Hagelloch, D-7400 Tuebingen 7, West Germany.

FOR SALE: 3rd edition of the "LIST OF SPECIAL RTTY AND CW ALPHABETS AND CODES", noe contains code tables for Arabic, Cyrillic, Hebrew, third shift Cyrillic, Greek, Korean, Amharic, and Thai 5-units CCITT3, and SITOR codes. Detailed descriptions of the "decoding" of Arabic and Cyrillic transmissions received on a normal machine and of ARQ/SITOR/FEC error protection systems are included. Arabic, Cyrillic, Greek, Hebrew, and Japanese Morse codes are also listed. This off set printed list is airmailed to you for $11.00 or 28IRC from Joerg Klingenfuss,Panoramastrasse 81, Hagelloch, D-7400 Tuebingen 7,West Germany.

continued from VHF News Column

Any RTTY action on 6 FM or SSB? K6PXA Arny, how are you doing? DAYTON isn't very far off!

See you next issue! Mike

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DATAPRO ELECTRONICS CW ID SYSTEM BOARD

BY Vince StaffoWB2FYZ, 10 Monroe St. Ilion,NY 13357.....

After constructing the Daytapro UT4B board and being well pleased with its performance I decided to give their MS-6 CW ID/Timer board a try.

The board can be built up as a full CW ID system consisting of a CW ID, Timer and various interface options. If only a CW ID is required it is not necessary to add the components for the timer, as the same board is used for both versions. The ID portion has provisions for programming your call or whatever you want to send via diodes which you insert into the board. The speed of the CW is variable from 5 to 20 WPM. The timer is adjustable for a 10 minute interval allowing you to ID at the legal requirement. Solid state interfaces are provided which allow you to interface with TTL logic circuits, direct transmitter keying and most AFSK units. A LED output is supplied which can be used for indicating when the ID is being sent out. A hold circuit is also included for stopping memory (such as on the UT4B) or a TD from sending while the ID is going out.

The board is a 4½ X 6½ inch, single sided type of excellent quqlity and it has a 22 pin edge connection pinout for ease of servicing and connection to the outside world. Sockets for the IC's can also be added if so desired.

I have had my board in operation for approximately one (1) year with no noticeable problems and I am well pleased with its operation.

Daytapro has a full line of board kits for RTTY use and they regularly advertise in the classified ads of the RTTY JOURNAL or you can write them for their catalog.

I hope to do another review on their UT2B board, which appears to have great potential for RTTY Repeater use

A circuit description of the MS-6 ID follows, along with a schematic and photograph. The instructions for using the MS-6 are also of fine quality and I hope anyone building one is as well pleased with its operation as I am with mine.

CIRCUIT DESCRIPTION

TIMER

A 555 clock chip (IC 8) is used to develop a clock pulse rate of .6 cps which is divided by IC 9 a 7490, (divide by 10 counter). IC 10 acts as a second divide by 10 counter and IC 11 acts as a third divide by 10 counter. The output of IC 9 is 6 seconds while the output of IC 10 is 60 seconds and the output of IC 11 is 600 seconds. (600 seconds divided by 60 seconds gives an output pulse every 10 minutes.

The output of IC 11 trips a 74121 monostable one shot (IC 12). A short output pulse on pins 1 and 6 of IC 12, the 74121, can be used to turn on Q5 and start the ID generating. A high (+5 volts) is required to start the ID. Pin 6 of IC 12 is normally low (ground) and goes to a logic high once every ten minutes for about 2 milliseconds. This is used to trip off the ID every 10 minutes. The other low going pulse (pin 1) which is normally high and goes low for the same two milliseconds each time pin 6 goes high, was led off the board on edge connector pin 9 for other options or controls the operator may wish to have. The only adjustment is the 25K pot which is used to set the timer from once every minute to once every 20 minutes. If a scope is used to set the timer, a full cycle at pin 3 of the 555 timer chip (IC8) should take .6 seconds. For adjustments without a scope, set the pot to mid-range and time the ID from the finish of one cycle to the beginning of the next. Set accordingly to achieve the 10 minute cycle. By increasing the resistance, (turning the pot toward the edge of the board) the time between cycles will be longer. Likewise, by turning it towards the center of the board it will decrease the time between cycles.

TIMER RESET

Timer reset is accomplished by placing +5 volts on edge connector pin #8. This is automatically accomplished on the board when the G to H strap is used.

OPERATION

CW ID

IC7 (555 timer chip) provides the clocking for the CW ID system. By varying the 1K pot, an ID speed from 5 to 20 WPM may be obtained. To increase this speed the 47 uf tantalum capacitor between pins 6 and ground of IC 7 should be lowered. Optional off board mounting of the speed control pot is obtained by deleting the 1K pot from the board and connecting an external (panel mount) pot across pins #15 and #16 of the edge connector. IC 2 generates the dot and dash control and is used to vary the length of a dot or dash. A dot is one clock interval while a dash or blank is three. After each dot, dash or blank a pulse is sent to IC 3 along with a flip-flop in IC 4, which forms a divide by 32 counter. The second flip-flop in IC 4 starts and stops the ID unit. The output of the divide by 32 counter is sent to IC 5 and IC 6. These are called four line to sixteen line decoders. Each of these two IC's gets the four outputs from IC 3, and one output from IC 4. The two IC's together provide a total of 32 output lines which are used to scan the diode matrix. In normal operation 31 of these lines are high (+5 volts) and only one is ground. When the ID starts to generate the identification the ground moves from pin to pin, starting with pin 1 of IC 5 and moving down the line, finally ending up at pin 17 of IC 6.

PROGRAMMING

To program the diode matrix for a call (figure 1), separate the call into 32 dots, dashes, and letter spaces (called blanks). With simple calls having K or W prefixes, there generally is enough room to include a DE in front of the call; with a 2 X 3 call the DE may have to be deleted depending on the call to be programmed. Then number the dots, dashes and blanks with numbers from 1 to 32, which assigns them to a specific position on the matrix. For every dot we place a diode from the corresponding IC output to the dot line; for every blank connect a diode to the blank line; and for a dash put in no diode. The cathode side of the diode goes toward the decoder IC. Figure 2 shows the typical diode. If a call requires less than 32 positions, diodes will have to be added on the

ASCII BANDPLAN by Mike Stone,WBOQCD

Many of have responded to the request of input of where you would like to see the "new" ASCII code placed within the band segment. A few said they would like it placed entirely out of the Ham bands..But the majority, most with computers and some with interest in computers or code-converters,responded that the 8-level code should be kept near or within the already established "RTTY" segments of each band. Many Baudot teletypers will continue to run the 5-level code in which the agreed segment is already crowded enough. Some will, with the ability to convert, run both Baudot and ASCII and will even be cross-moding the different codes.

In a recent article in the JOURNAL I mentioned that "RTTY" does not distinguish between different levels of codes. RTTY is defined as high-speed communications using a teletypewriter and transmitting the message by "radio-link". The chart below, is a suggestion by RTTY JOURNAL for RTTY frequencies including the "new" ASCII code when finally approved. Placement of ASCII in this area will:

1. Allow established Baudot users continued portions of the agreed band segment without loss.
2. Allow uniformity among the three high-speed "RTTY" communication modes into one continous area.(This will lessen problems between CW operators if we are spread all over the band).
3. Discourage CW and other mode QRM from encroaching within segments.
4. Allow the exchange of "computer" information and communication or for those using Baudot/ASCII code converters.

Final outcome and operating fre-- quency guidelines will be established after FCC approval of the ASCII code for Amateurs. Please submit your opinions, agreements or disagreements. We are the users of this mode, and will determine how and where it is used.

Proposed ASCII frequencies HF bands.
80 meters 3.650-3.675 Mhz.
40 meters 7.100-7.125 Mhz.
20 meters 14.100-14.125 Mhz.
15 meters 21.100-21.125 Mhz.
10 meters 28.100-28.125 Mhz.
??????????????????????????????????????

DAYTAPRO ELECTRONICS CW ID SYSTEM BOARD

blank line between the beginning and the end since this gives the equipment time to stabilize before transmission re-starts. (also see hold).

SUPPLY

The ID requires +5 volts regulated within 5% at about 300 ma. (200 ma.for the mini version) and a good ground. An on-board 7805 voltage regulator is supplied if 5 volts is unavailable. To use the regulator connect the filtered supply line to a resistor (see chart one) and then to pin #3 of the edge connector. Pin #2 of the edge connector should go directly to ground with no other wires connected to it. (See figure 3). Pin #1 of the edge connector will be used only if the on-board regulator is not used. In this case delete the regulator from the board and connect the positive 5 volt line to pin #1 of the edge connector. The ground on pin #2 of the edge connector may also be eliminated if the regulator is not used. The ground for the system would then be located on the edge connector pin #5.

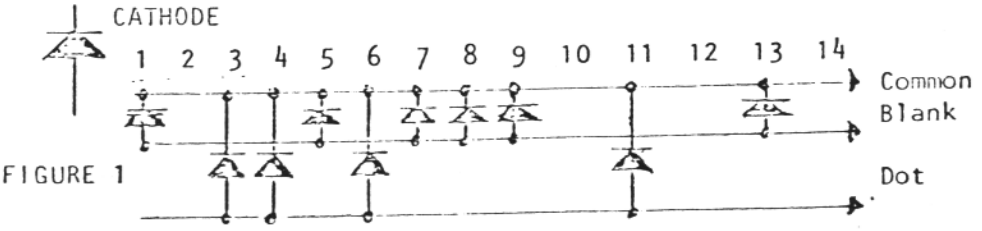


FIGURE 1

FIGURE 2
Typical matrix hook up for 1 X 3 call. Coded for d.

FIGURE 3

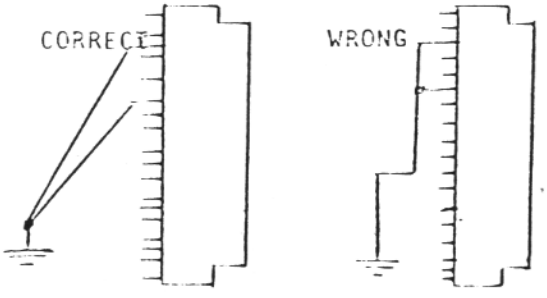
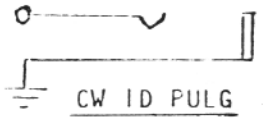
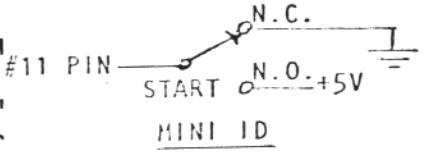


FIGURE 4

FIGURE 5





STARTING

To start the ID a push-buttom switch is required on mini versions (ID only) and optional on full versions of the ID (see figure 4). Connect one side of this switch to the edge connector. Two positions on the edge connector have been supplied for this purpose. They are pins #11 and #12. Start should be held low when the ID is not in use. On full version ID units this is accomplished by the timer. Mini version ID units should follow figure #4.

OUTPUT

Logic level (L to M strap not required).

KEYING

Logic level output keying appears on edge connector pin #22. High to low keying (+5 volt and ground) normally at 5 volt in idle and ground during keying pulses, is obtained by the M to S strap. This is used in cases where AFSK or FSK voltage is normally positive 5 volts in mark and goes to ground in space. This is non-standard but sometimes used.

Low to high keying, normally a ground in idle state and high during keying pulses is obtained by the N to S strap. This is used in cases where FSK voltage is normally mark at 0 volts (ground) and space is +5 volts. This is standard keying in most terminal units such as the ST 5000 and ST 6000. NEVER CONNECT THE M TO S AND THE N TO S STRAP AT THE SAME TIME. The above keying is used in most digital terminal units. Another keying output is supplied for units with a higher keying voltage. For keying a 12 to 20 volt line the L to M strap would be required, while the M to S strap and the N to S strap would not be used. One may be left in for LED signalling. This will be explained later. The on board interface circuit for TTL to higher keying voltage is obtained on pins 4 and 7 of the edge connector. To use, a voltage reading to ground across the CW ID keyjack on the TU is required. If a positive voltage is observed then pin 7 of the edge connector and a ground from the chassie would be connected to the CW ID keyjack on the TU (Normally AFSK keying). If a negative voltage is observed then pin 4 of the edge connector would be used instead of pin 7. These voltages are made with the terminal unit in the marking conditin. (Normally used for FSK keying). Negative keying voltage would require the connection of the negative 12 volt supply to pin 10 of the edge connector. For positive keying the -12 volts need not be connected. If the voltage is 25 to 250 volts, positive is measured across the key then pin 6 of the edge connector would be used along with the chassie ground. (This type of keying is seldom found and is usually used for direct transmitter keying or direct loop keying). Pin 20 of the edge connector is an LED indication out put. By leaving the M to S strap or N to S strap in for interface keying (normally used for logic level keying), an LED indication may be obtained. [illegible]ring the 1K resistor off of edge connector pin 20 on the PC board, the LED will burn brighter. DO NOT USE A RESISTOR BELOW 200 OHMS. In some cases the LED will not burn or it may be inverted. It will be necessary to reverse the leads of the LED if it will not light at all. If it is inverted (on all the time and goes out when the CW is going out), then connect the LED's free end to the opposite sourse. (If the LED is not lit and is connected between pin 20 of the edge connector and ground it will be necessary to connect it to pin 20 of the edge connector and +5 volts.) If after reconnection it is now inverted then change the strap (if M to S change N to S) and the loose end of the LED to the opposite pole. If 5 volts tie back to ground.See fig.6. Remember that the LED should light only when a dot or dash is being sent. It should be out in an idle state.HOLD

HOLD

Pin 13 of the edge connector suppliess a holding option. This pin is normally at ground and switches to +5 volts when the ID cycles. Off board its uses may include stopping the memory output from a UT-4 while the ID is going out. For this reason it is wise to put any extra diodes evenly at the beginning and at the end of the matrix. If you have only one extra diode put it at the end of the matrix (slot 32). One other common use of the hold option is to start and stop a TD (transmitter distributer). Here it would be used to control a relay which has the power line going to the TD clutch in series with its contacts. It would stop the TD relay when the ID started and restart the TD relay when the ID finished. See figure 7 for a typical hook-up for TD control. It is a good idea to use a GEMOV transient suppressor across the relay contacts that are in series with the power line for the TD clutch magnet.

CHART 1

SUPPLY	RESISTOR FULL	RESISTOR MINI	WATTAGE FULL	WATTAGE MINI
12V	13ohm	20ohm	2W	1W
15V	22 "	35 "	3W	2W
17V	30 "	45 "	3W	2W
20V	40 "	60 "	4W	3W

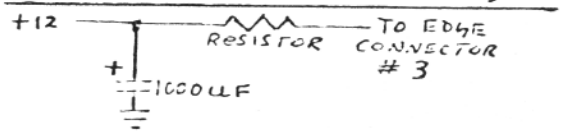
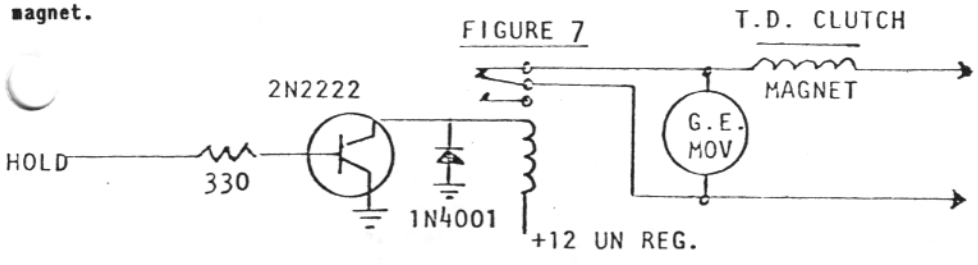


FIGURE 6

N to S OPTION

M to S OPTION



continued from HITS AND MISSES COLUMN

should be available on UHF for experimentation. In my column last month I talked about ASCII on the HF bands and this month on VHF and UHF bands. What is your thinking?? I would like to get your input.

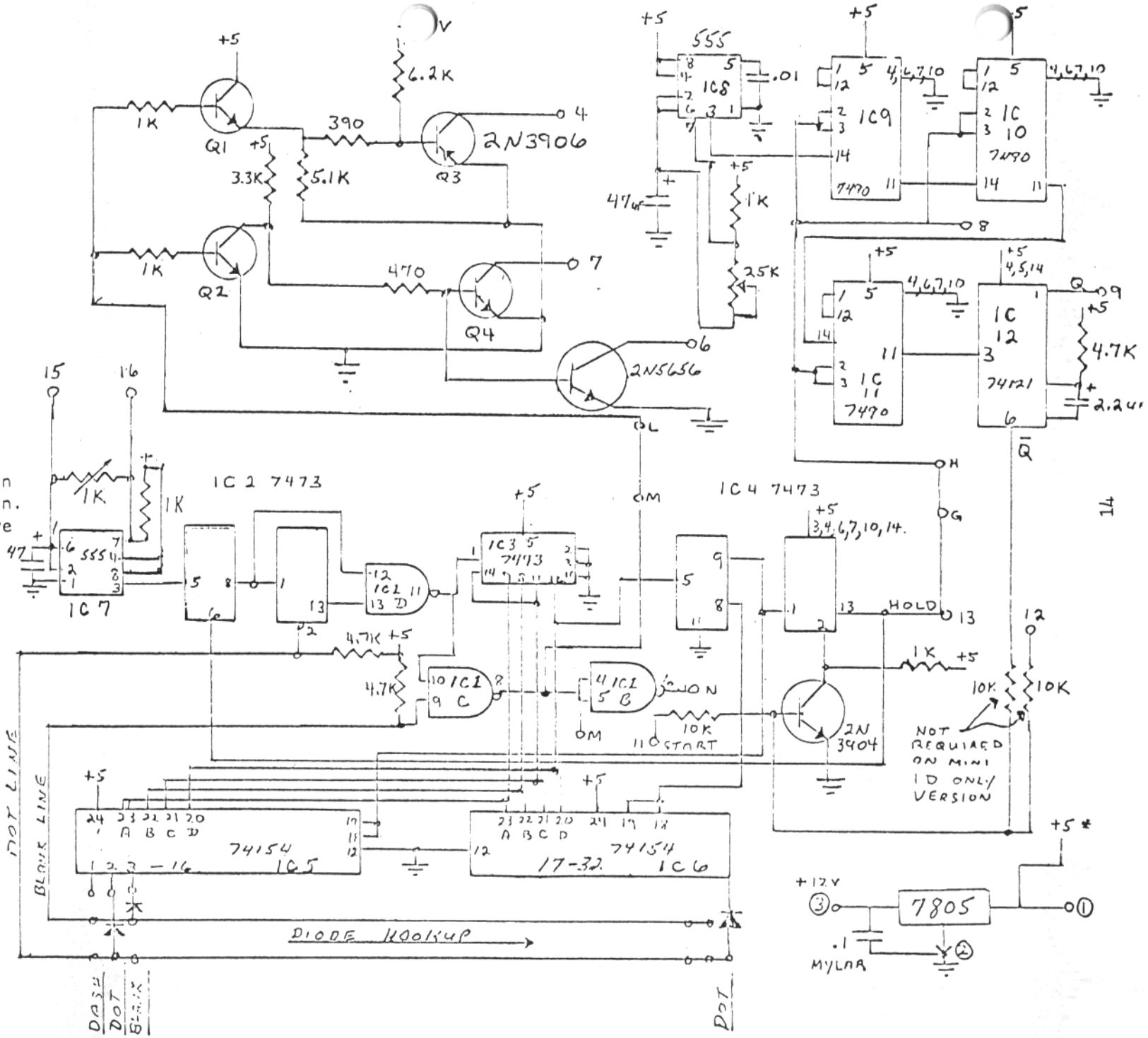
So long for now George.....

WANT ADS CONTINUED

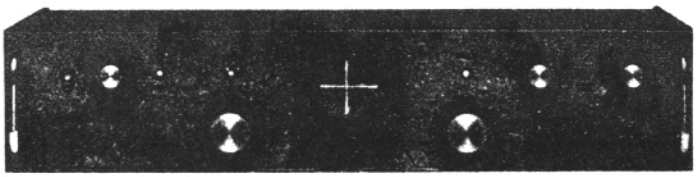
IF-2 SELCAL-WRU PRINTED CIRCUIT BOARD $15 (73 Magazine pg 254,Nov.78). Contains all circuits to control TTY and transmitter. Programmable to any access code in minutes.Easily interfaced to any station.Contains to UT-4 (UART), or IF-1 Regenerative repeater PCB,$12.Complete documentation. Commercially fabricated boards. R.Perry 38 W.255 Deerpath Rd.Batavia,IL 60510

MS-6 CW ID SYSTEM.

* When a 5 V Supply is available it is tied directly to pin one of the edge conn. Pins 2 & 3 will have no connection in this case.



DOVETRON



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Multipath Correction
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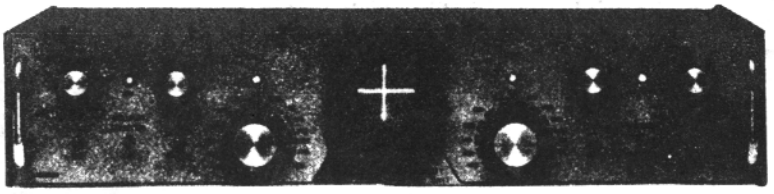
Amateur Net: $545.00

Standard features include CONTINUOUSLY tuneable Mark and Space channels (1000 Hz to 3200 Hz), Dual Mode (MARK or FSK) Autostart and internal high level neutral loop keyer (20 to 60 ml). Both EIA and MIL FSK outputs are provided for direct interface to microprocessor and video terminal peripherals.



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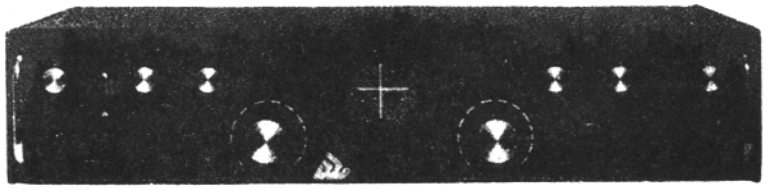
Amateur Net: $645.00

A front panel switch permits internal TSR-200 Signal Regenerator-Speed converter assembly to electronically "gear-shift" between 60, 67, 75 and 100 WPM. All incoming and outgoing signals are regenerated to less than 0.5% bias distortion. Also available with DIGITAL Autostart (TSR-200D): Amateur Net: $695.00



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*The MPC-1000R is also available without a TSR assembly and functions as a MPC-1000C with a Triple Tone-Pair AFSK Tone Keyer. This "Basic-R" permits future expansion with a TSR-100, TSR-200, TSR-200D or TSR-500 by simply lifting the lid and plugging in the appropriate TSR assembly: Amateur Net (Basic-R): $595.00

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