RTTY Journal

JANUARY 1980

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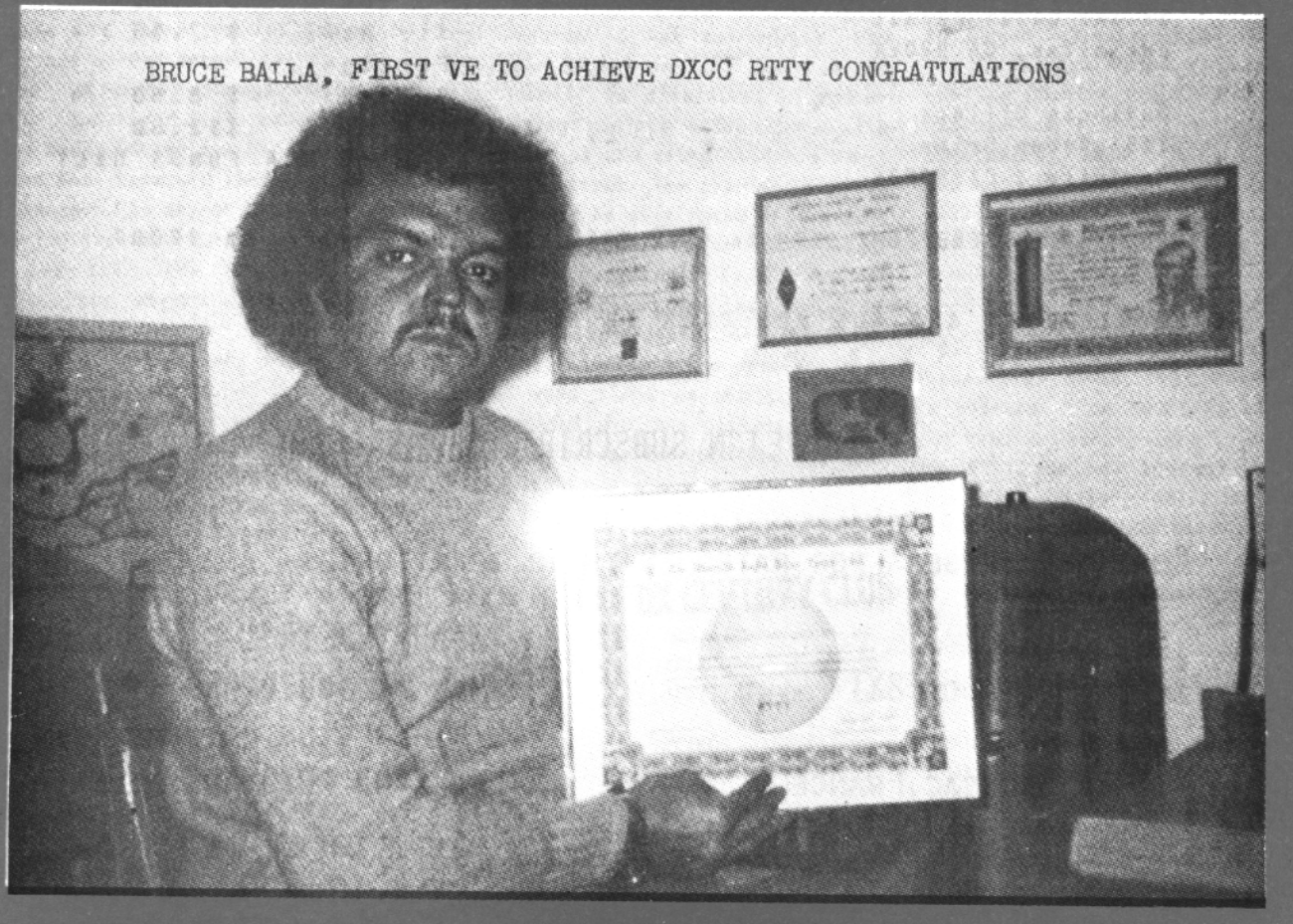

BRUCE BALLA, FIRST VE TO ACHIEVE DXCC RTTY CONGRATULATIONS

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THE MS-5, A QUICK AND CLEAN PERSONALIZED RTTY ID
CONTESTS

RTTY JOURNAL

Dee Crumpton
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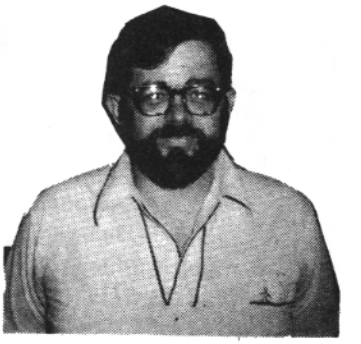


Greetings to all!

I trust that everyone has successfully made it through another holiday season. I have received several letters stating that Gordy,HL9WU's address was no good. When sending QSL cards to Military APO/FPO's please include the operators full name, in this case Gordon Anson.

I was fortunate enough to be the first stateside RTTY contact that Gordy made. During our QSO Gordy mentioned that he would like a stateside QSL manager. So anyone who would like this job please write to: Gordy Anson PSC Box 2137, APO San Francisco,CA 96366. Also anyone else desiring a stateside QSL manager please drop me a line and I'll very happily have your request printed.

Anyone that would be interested in becoming a QSL manager write to me and I'll run the information here so that the DX stations can contact you directly.

In talking with Gin, JA1ACB recently he mentioned getting news from Alain, 5R8AL that Alain now has the correct gears for his Creed 7B so will be more active. Hiro, JH1HWN is planning operations from JD1 Bonin and Volcano Islands during the winter vacation, JT1KAA is active now but is receiving split mode so is hard to catch. Try using CW to start with then switch to RTTY.

With The Holidays past we will experience many new stations on the air I am sure as in the past when these new Christmas "toys" start showing up on the bands that we will have some with RF feedback problems. I noticed several in the past week. In particular,I noticed Mac,K7BV trying to get across to a station having problems what was wrong. Mac was doing a great job of helping as I have noticed him doing before. The reason I am mentioning this is that the newcomers need this kind of help. (Publishers Note: See this months VHF column on this subject). You can help all of us in cleaning up the problems as they come in by giving honest signal reports AC hum and clicks, yes they can happen on RTTY also. The AC can usually be eliminated by proper by-passing of all audio lines with .001nfd caps and using shielded cable for these lines. The popping or click can usually be eliminated by reducing the audio level from the AFSK generator in a very small level. Many of the TU produce signal levels some as high as 1 to 3 volts peak to peak.

I can still recall the problems that I had when first on the air, and I am thankful for the patience of the hams who helped me work the bugs out of my station.

Here is a list of some stations that have been observed or worked in the past few weeks: Gw3EHN,C5AAN,T4AHC, 5NOSID,5NODOG,7P8,GJ3FKW,GD4IHA,9V1SR 5R8AL,3B9RS,FR7BE,9G1JX,WA6QFN/H5,VP-2SV,ISOIBP,YU2CDS,YO3AC,HAOKDA,G4BHT/ 4X4,VK2BAB,HK3ECH,5Z4RT,TI2CAH and OY1A.

I would like to thank the following hams for their help and inputs: JA1-ACB, HL9WU,K7BV,WA4JJY,K6WZ,W2LFL and K1LPS.

Canadian Amateur Radio New Service Bulletins are transmitted with the co-operation of the Carlton Amateur Radio Club (VE3OCU/VE3OCR) using the callsign VE3TCA, in accordance with the following schedule: Sundays 2130 UTC, 14.078, 170HZ,45.5 baud followed by ASCII at 110 baud. and Tuesdays at 0130 UTC, 170HZ, 45.5 baud followed by ASCII at 110 baud.

The Spring Marathon Race Contest will be held to promote Japanese RTTY from 1 January to 31 January 1980 sponsored by J.A.R.T.G.

AWARDS SECTION

W.A.C. #77 all on 20 meters dated 1 December '79 goes to Paul Johnson,KO-PJ/W6. W.A.C. all on 20 meters dated 10 December '79 goes to Jürgen Schlenger,DK5WJ #78.W.A.C. #15 all on 15 meters dated 10 December '79 goes to Jürgen Schlenger,DK5WJ. WAS, worked all states dated 1 December '79 goes to Charles Prindle, W6JOX, DXCC endorsement 150 sticker goes to Ros Pentimalli, I8AA, DXCC endorsement 150 and 160 stickers goes to Gustavo Pellegrini, DXCC NR43 dated 1 December '79 goes to Doc Watson, W7MI. Great job done by Doc.

HAM HELPS

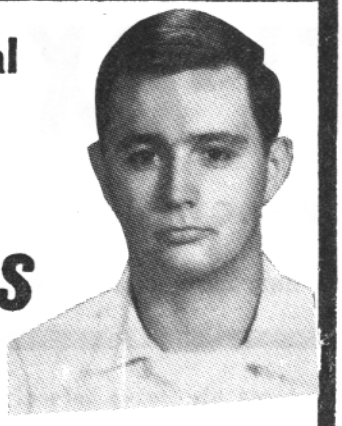
Carl Davis, 10526 Gray Fox Way, Savannah, GA 31406, writes that he has a Western Union Model 28 ASr and is in need or wiring info to convert it to RTTY. He has the wiring diagram for the military AN/FGC56 which is of little help due to major differences in the power supply and wiring.

DXCC HONOR ROLL

CALL	WORKED/CONFIRMED
W3KV	179/175
W3DJZ	170/163
I5WT	161/161
K7BV	171/160
I8AA	154/151
W4CQI	153/146
W8JIN	134/129
F5JA	132/123
W3EKT	125/118
K6WZ	125/115
JA8ADO	118/110
DJ8BT	111/106
W7MI	110/101
WA6WGL	102/85
DK5WJ	101/76
WB6CYA	88/74
WOMT	79/73
W8CAT	66/59
WB2VTD	67/57
DF7FB	65/53
WA6CQW	50/49

RTTY Journal

VHF RTTY NEWS



Mike Stone, WBØQCD

P.O. Box H, Lowden, Iowa 52255

HAPPY NEW YEAR!!

"LET YOUR FINGERS DO THE TALKING" is the slogan for Chicago Area RTTY Repeater System (CARRS) new quarterly journal "LINE FEED" publication. WB9-WIC/R has two inputs at 144.71 and 146.70 Khz. outputting at 145.31. The new RTTY repeater system will soon be offering WX information service, memory storage system, member mailbox service and personal coded message retrivals via a micro-processor computer. K9WRL, WN9ZHG, WB9SPV, WA9KEK, WB9WIC, WA9DRZ, K9HDU, KB9CS and WB9-RTX are a few RTTY buffs responsible for Chicago's F2 repeater.SOUTHERN NEW JERSEY area will be hearing VHF RTTY tones on 147.345/.945 from Waterford Works Tower on 850 shift at 60 WPM reports K2ADJ. Rodney Fowler. Parts of Philadelphia will also hear the new system located near Hammonton NJ. Tom Todd from Moore, OK writes of steady activity on their 146.10/70 all mode repeater. WR5ASI with future plans of interfacing a S-100 40K computer and possible linking to the Dallas RTTY group via Ardmore, OK. St. Louis, MO RTTY buffs use WROAJP on 146.10/70 as does Ohio RTTYers on WR8ART. VHF RTTY still "hot" in Spokane, WA Via WR7ASA on 147.78/.18. Would like to hear from more VHF tele type repeater groups/clubs. KOFXM, John Baker of Muscatine, IA, recently built his own loop supply and interfaced a Model 15 KSR to his Info-Tech 200E and 150 keyboard system.Baudot "hard copy" printers are becoming excellent buys with many moving into computers. KOVKH Dick Uhrmacher, Rapid City, SD writes of his satisfaction with his InfoTech gear and newly acquired M70 converter that he is now a dealer for them.

AMRAD group used a computer for message handling during Octobers' ARRL-SET exercize. ASCII is just around the corner with help from W4RI,Paul, and Carlos roberts and John,W3BE. "A study of Ascii, Baudot and Morse" codes is underway by W4RI. Copies of any off-beat telegraphic codes would be appreciated,E.G., Korean and Hebrew morse codes. Write Paul at:1524 Springfield Avenue, McLean, VA 22101.

VHF Teletype on Oscar Satellites interest is increasing with nearing of a new stationary phase III orbital satellite. Let's hear from those of you working this exciting and challenging means of space-age communication. New SAT-TRACK INTERNATIONAL CO. offers satellite tracking software for Apple, Sorcerer and TRS-80 computers 4543 Templeton Gap Rd., Colorado Springs, CO 80909.

With "voices heard" of lack of radio teletype representation it appears the "League" has been awakened. Finally!

Gary, WAONDN writes that there are about 20 VHF "autostart" users on Minneapolis 146.10/70 RTTY repeater WOBP/R although activity has slowed down a bit. Gary still has some quantities of the only "RTTY JOURNAL" Bibliography left covering all past aticles run and what date issue they can be found in.

John, WBOGUX(technician at Info-Tech advises us that VHF RTTY in the St. Louis,MO area has grown so rapidly with interest that the St. Louis Amateur Teleprinter Society (SLATS) has split into two groups,#1 covers south areas and has about 60 members,#2 covers the north area with about 3[illegible] members. WROAJP runs about 30 watts output from a Motorola system with antenna location about 1000 feet ASL. Using 850 shift/60 WPM, the repeater is located in Hillsboro, MO and covers an effective range of about 100 miles. Crystal-controlled AFSK is used in a modified "InfoTech" base terminal system for repeater regeneration.

Anybody know anything about a Model 35 Data Preparation Set? WB5KUI (AAR-6ZO) has one,write to Bob Glines, POB 97, Floral, AR 72534.

With the popularity of Micro-super keyboards and terminals growing, high speed morse code communications (MTTY) is also growing. I would like to hear from those of you running that mode and the frequencies you are operating. Any crossmode MTTY and RTTY?

SEE YOU IN FEBRUARY!! MIKE

LOOKING BACK

to

"TAPE OFF THE FLOOR"

WBOESF

R.Wilson, 4011 Clearview Drive, Cedar Falls, IA 50613

QST QST QST DE W6CMQ W6CMQ
Tuesday, 5 January 1954

QST QST QST DE W6CMQ W6CMQ
Tuesday, 5 January 1954

My boss at the Mare Island Naval Shipyard at Vallejo, California telephoned today to say I would have to cut my leave short and return to Mare Island on 18 January.I expect to be there until 20 January when I will depart for a series of meetings in Pearl Harbor,Washington and the Phillipines.Following the meetings,I expect to resume my regular assignment in the Phillipines. Anyway, being home was fun while it lasted. Sig.Ted W6CMQ.

..RTNET de W6CMQ Clear.Thanks GA.

Roger Ted sorry to hear you are leaving so soon.

So many thanks Jack for FB QSO and sure hope we will get together again before too many moons pass by!!!!!!

W1BGW W1BGW de W9TCJ,Williams Bay,WI

Classified Ads

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

SELL, NEW FLESHER,UART,TR-128 factory built.Chuck,W6JOX,401 Carrillo St., Santa Rosa, CA 95401 $200.00.

WANTED:TELETYPEWRITER PARTS and assemblies for Teletype,Kleinschmidt and Mite Corporation machines. Phil, W4LNW, P.O. Box 70,Morrisonville,NY 12962.

RTTY! ST-5X TERMINAL UNIT-AFSK-power supply. WRU. RTTY scope and amplifier Boards and kits. Bomark, Inc.,P.O.Box 7116 Hollywood, FL 33021,305-962-7219

6800 MICROPROCESSOR OWNERS RTTY operating software for SWTPC or similar processors. Transmit Baudot or Morse and receive Baudot code. Written for on the air use-keyboard selection of pre-loaded messages or CW ID. Can also be used as buffered CW keyboard with keyboard speed control. For more info and price send brief description of your system to K9AR, 742 S.Vail Avenue, Arlington Heights,IL 60005.

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

FOR SALE: RTTY demodulator, designed especially for the reception of short wave RTTY signals with various types of speeds and shifts. The PLL circuit is adapted automatically to the shift of the station received!Printing usual stations like press, military, amateur, diplo, weather, 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 460.00 or 60.00. Some more information is air mailed to you for DM 10.00 or $6.00; this amount is credited on the final price of the unit if ordered later on. Joerg Klingenfuss, Goethestrasse 14, D-7400 Tuebingen 1, West 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, military, diplo, telex, weather, etc., on shortwave. Schedules of around 100 news agency stations are also included. This offset printed list is airmailed to you for $15. or 39 IRC from Joerg Klingenfuss, Panoramastrasse 81,D-7400 Tuebingen 7 Fed. Rep. Germany.

HARDCOPY: RECENTLY REFURBISHED Teletype machines available. 32 R/O $279. 95, 33 R/O $379.95, 33 KSR $489.95, 33 ASR $599.95 FOB Ottawa Canada. Prices in Canadian dollars, Visa and MC accepted. C.O.T.S. Enterprises, Box 3103, Stn.D, Ottawa,Ont,Canada K1P 6H7.

FOR SALE: 28 ASR TABLE-TOP compact (1); 28 KSR (single-speed (2),w/gearshift (1)'M28 ROTR (single-speed (2), w/gearshift (3);M28 LXD stand-alone TD (10); 28KSR compact w/gearshift (1);28RO compact w/gearshift (2);34 ASR (1);M28 keyboard typing reperf (2); M28 triple LXD (2);M28 underdome typing reperf (single-speed (1) w/gearshift (2);friction-feed mod kits, NEW (3); 2-shaft reperf for 28 ASR (2); 60-75-100WPM gearshifts for 28 KSR, RO new (5), M28 motorized paperwinders (10); self-contained answerbacks (3); 35 KSR (1); 35 ASR (1); 33ASR TWX (1). Gears and parts available for all machines. Send SASE for list and prices. Lawrence R. Pfleger, K9WJB,2600 S.14th,St.Cloud,MN 56301.

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

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 genral ham radio equipment. Call 'Dick", KO-VKH, 605-343-6127 for special quotes on all of your equipment needs.

"RTTY AWARD HUNTERS" 73 MAGAZINE annouces 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. 1250 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,W2JC/W2BVE, Box 73 Paramus,NJ 07652.

SELL: TRS-80 COMPUTER, 16K-level II, Macrotronics M-80 Interface-M800 RTTY CW program, factory ST-6 TU, 30 extra programs, ALL extra mint $1,200. K4-JAF 7316 Valley Lane,Hixson,TX 37343. 615-842-3379.

FOR SALE: INFO-TECH M200E Converter, M300C keyboard, VM4209 Sanyo 9 inch video monitor, magnetic tape interface board. Complete RTTY staton,cost over $1,200 less than 3 months old. Absolutely mint. First $900.00 certified check gets it shipped UPS insured complete with all manuals and original packing boxes. Lee Lust,WA2-ETQ, 1101 Maple St.,Utica, NY 13502, 315-724-9244.

WANT ADS CONTINUED

TELETYPE MACHINES APPROX. 3 Tons of models 33,35 ASR,KSR and RO. Some complete, some missing parts, lots of misc. used parts, also a couple of 28 ASR's. Sell all in a lot or individually. You inspect,pick-up. A.C. Dickey,K7GCP, 51 N.850 West, Orem, Utah,84057. 801-225-0678.

THOUSANDS OF COMMERCIAL RTTY Stations are active between the Amateur shortwave bands. Many of them can be printed 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.

KEYBOARD-MICROLOG AKB-1 All RTTY speeds,plus CW with AFSK modulator, buffer and message memories $399.00 Video Display-Microlog AVR-2 decodes all RTTY speeds plus ASCII and CW. Built-in dual tone demodulator, audio visual tuning indicators plus scope output. Direct hookup to receiver audio for perfect copy $499. Printer/speed converter interface add $75.Use your TV with RF modulator or our professional video monitors. 9 inch $189 15 inch $279. Brag Tape accessory may be used with any keyboard. Record your message on any cassette tape. Transmit recorded message at any time Only $75 fully assembled and tested. 110 vac.AFSK demodulator.Hi/Lo tones, normal or invert. Audio in TTL out. Assembled and tested, 110 vac. only $75.AFSK modulator. Factory set for 2125/2295 may be adjusted for other frequency pairs. Fully assembled and tested,110 vac. only $50.Computer PC board G10 double sided plated thru holes uses Motorola 6800 microprocessor with full description and diagrams $10.Complete parts kit including M6800, M6821, M6810 (2) plus power supply. With complete assembly instructions and application notes $39. Ask your favorite dealer or order directly from MICROLOG Corp., #4 Professional Drive, Suite 119, Gaithersburg, MD 20760. Visa/MC welcome.

THE DOVETRON TBA-1000 BAUDOT-ASCII Code translator is designed to interface Baudot and ASCII circuits.I/O may be low level polar (EIA RS232C or MIL 188C) or high level neutral (active or passive). Parallel ASCII is also available. A preloadable 192 character buffer prevents character over-runs when down-converting baud rates. ASCII Control characters may be used to command peripheral equipment and functions. Features such as Unshift/Space, LTRS Only, Blank Diddle, Variable Character Rate, LED Memory Status Indicators and TD Inhibit are standard. Baudot speeds of 45,50,57 and 75 bauds are front panel selectable. ASCII baud rates of 110, 150,300,600,1200,2400,4800 and 9600 bauds are internally selectable via a BCD coded DIP switch. All baud rates are crystal controlled and programming instructions are etched on the PC board. The 3.5" X 9.0" X 17.0" package is self-contained and available as a table top or rack mount unit. Power requirements are 115/230 VAC, 40-400 Hz, 10 watts. A bypass option is available. Amateur Net:$395 FOB. DOVETRON,627 Fremont Avenue, South Pasadena, CA 91030.

TELETYPE EQUIPMENT AND SUPPLIES.Model 28 friction feed receive only $125. Model 28 friction feed ASR $350. Good Model 28 KSR/RO motors (LMU-3) $15. Model 28 stand alone TD (LXD) $100. New white paper (12 roll case) 4½" diameter $21;5" diameter $25. WANTED: 11/16 reperf tape. One only Model 19 complete $100 (pick-up only). Packing charge for RO's and ASR's FOB Rochester,MI.Poul Andersen,115 Boyken Rd. Rochester,MI 48063. 313-652-3060.

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

RTTY CLOSEOUT-COMPLETE KITS ONLY.NS-1A demodulator $15.00. NS-BP bandpass filter $9.00.Postpaid. SASE for info. Nat Stinnette Electronics, Tavares, FL 32778.

NOW YOU CAN KEEP SENDING RTTY While you CW ID. The MS-738 AFSK tone mixer is the VHF answer. See November 1979 RTTY JOURNAL for full description. Kit $9.95 plus $1.00 shipping. Daytapro Electronics, 3029 N. Wilshire Ln. Arlington Heights,IL 60004,Visa acptd

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TELETYPE MACHINES AND ALLIED EQUIPMENT. SASE FOR LIST. MODEL 28 THREE (3) SPEED RECEIVE ONLY $250.00. Model 28 ASR, PERFS,REPERFS, TD'S, ROTR's, MODEMS TWX'S, TELEX'S ETC. ANTIQUE TELEGRAPH INSTRUMENTS. GOODMAN 5454 SOUTH SHORE DRIVE, CHICAGO,IL 60615. 312-753-8342.

MODEL 28 ASR WITH KEYBOARD Perf and TD $350. For reperf instead of perf add $50. Model 28 KSR $175. For answerback 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. Other goodies available,all equipment rewired and ready to plug in FOB Akron. Bill Parker, K8NCV,984 Amelia Avenue, Akron,OH 44302.

TELETYPEWRITER 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.

THE RACK LINE BY DAYTAPRO,FOR INDIvidual or repeater these versatile uniform boards will do the job right. All boards are 4½" X 6½" (same as the DT-600) G-10 1 oz. copper plated with a 22 pin edge connector included. CW ID System, interfaced for digital, FSK or AFSK keying, 10 minute timer, variable speed (5-24 WPM) 12 or 5 v. use. Kit $27.90, board alone $8.95. Mini-Version of above CW ID (CW ID only) kit $19.95 (new low prices) M4D Power Supply, plus 5 volts @ 1 amp with crow bar protection, plus 12 v. @1 amps and minus 12 v. at 1 amp.Each fused and has LED indication. Kit is $32.50 board alone $8.50. Duel XB-6 Crystal Controlled Clock for Uar/t control develops 6 baud rates each. Kit $26.95 board alone $8.50.Crystal Controlled AFSK. Now enjoy rock solid frequency with no drift. Kit $28.49 board alone $8.75. TU-Loop Power Supply. Low voltage supplies (+5,+12 and -12) all rated at 800 mils each with a high voltage loop supply with the

the exciting new
INFO-TECH M-70 CODE/SPEED CONVERTER

The Info-Tech M-70 is a microprocessor based unidirectional simplex conve~er which will accept as an input: Loop, RS-232 or TTL signals at Baudot speeds of 60, 66, 75 or 100 wpm or ASCII speeds of 110 or 300 baud. The outputs of the M-70 are: Loop, RS 232 and TTL at Baudot speeds of 60, 66, 75 or 100 wpm or ASCII at 110 or 300 baud. With simple external switching, the M-70 can be operated half duplex in any mode/speed conversion combination.

A 1024-character buffer is provided for down-speed conversion, with buffer empty and buffer full status indicator outputs.

OTHER FEATURES:

- Auto-start output with two selectable formats: channel active, or space character detect
- Two programmable sel-cal (selective calling) outputs decode up to 7 characters each. (4 character turn off code)
- WRU output generated after detection of a string up to 7 characters long
- Selectable automatic C/R and L/F
- Selectable unshift on space (Baudot inputs only)
- Selectable bell defeat
- Selectable parity select (ASCII outputs only)
- Buffer Run/Load input

PRICE $175.00 FOB ST. LOUIS.

The M-70 is a "Semi-Kit", including a completely assembled and tested printed circuit board with 22 pin, double side edge card connector, power transformer, complete schematic and operating information with several application examples. All that need be added are selecting switches, when options may want to be changed, indicating LED's, and a suitable cabinet or card rack position.

User Specified, Factory Programmed Options Include:

Selcal #1 = _ _ _ _ _ _ _ Off = _ _ _ _
Selcal #2 = _ _ _ _ _ _ _ Off = _ _ _ _
WRU = _ _ _ _ _ _ _

Enter only one character per space, including non-printing characters, shown as follows (all spaces need not be filled in):

Figures = ↑ Line Feed = L/F
Letters = ↓ Blanks = BLK
Carriage Rtn = C/R Space = SPC
eg. Selcal #1 = W ↑ Ø ↓ K E BLK Off = N N N N

Please use order form supplied.

see above

INFO-TECH INCORPORATED
Specializing in Digital Electronic Systems
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St. Louis, Missouri 63141
(314) 576-5489

WANT ADS CONTINUED

Keying transistor located on board. Also has a 20 mil loop driver and keying provisions, input keying need be only 5 v. and ground. Kit $52.49., board alone $8.50. Extension boards (available in February 1980) two types. Straight for rack testing and 90 degree angle for cabinet testing. With edge connector kit $13.95. UT2B speed convertor transitional autostart on board clocks, parallel buffered outputs, FSK keying output and edge connector mounting to name a few of the options available on this basic speed converter. Complete signal regeneration with keyboard speed conversion. Complete kit $39.95, thru plated board alone $13.95.Datapro Electronics,Inc.,3029 N.Wilshire Lane, Arlington Hts.,IL 60004,Phone 312-870 05555 evenings. Add $1.00 for shiping, Visa accepted

NSCHMIDT RE-PERF TT-107, Choice o~r 100 words. Checked out and work ing $39.95 add UPS-40 lbs.HARMON 5628 10th Ave.S.Birmingham,AL 35222.

SALE! SALE! SALE! SALE! RTTY ID Generator. Accepts 5 or 12 volt supplies 31 characters available(please include letters,figures,spaces etc.) Your pre-programmed answer-back must be supplied with order.Example:DE K9WRL,Neil Arl Hts Ill, Board is the same size as the ST-6 boards. Was $34.99 Sale price $24.95. Board alone was $8.50 Sale price $6.95. Add $1.00 for shipping. DATAPRO ELECTRONICS, 3029 N.Wilshire Ln,Arlington Hts,IL 60004 Visa available, Phone orders 312-870-0555 evenings.

UT-4 KITS NOW AVAILABLE, All logic, resistors, capacitors, diodes, and transistors to fill board, edge connector included. See Nov 1978 RTTY JOURNAL for users report. Kit $109.95 UT4B board alone $17.95. M4D power supply for UT-4B kit $32.50 board alone $8.50. Dual XB-6 optional crystal clock for UT-4B kit $26.95,board alone $8.75. Additional information available with a stamp. DATAPRO ELECTRONICS INC.3029 Wilshire Ln,Arlington Hts,IL 60004,Visa accepted. Phone evenings 312-870-0555.

HAM RADIO THE NO-NONSENCE STATE-OF-the art technical magazine.Dozens of exciting projects and an emphasis on quality. Subscribe now and see for yourself.1 year $12.00,2 years $22.00 3 years $30.00.HAM RADIO Magazine, Greenville, NH 03048.

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.
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Add UPS WT, HARMON,5628 10th Ave., S.Birmingham,AL 35222.

UT-4 COMPONENTS (WHILE PRESENT STOCKS LAST).FC33513DC fifo $12.00,AY5-1013A uart $5.00, 1408L-6 D/A $3.25.Also programmed PROM's (3 state) for VE3-CTP (or SWTPC) ASCII/Baudot/ASCII conversion (Ham Radio Aug 77) $3.25 each. Peter Bertelli,W6KS, 5262 Yost Pl.,San Diego,CA 92109.714-274-7060.

KONTEST KORNER

Giant Flash North & South America 19-20 January 1980.
Giant Flash Europe & Africa 9-10 March 1980.
DARC "CORONA" 10 meters 15 March 1980
BARTG March 1980.

HITS & MISSES FROM THE MAILBAG

George Hammon WA6CQW
14215 Pecan Park Lane SP 73
El Cajon, CA 92021

HEATH COMPANY

A Zenith data systems division has been set up with the purchase of heath for 64.5 million dollars. This Zenith division will market fully assembled Heath personal computers. Computer retail stores will be opened Heathkit electronic centers and Heath's mail-order catalog will remain as now in effect. Heath will be operated as a wholly owned Zenith subsidiary. Electronic kits, manufacturing along with service will continue to be handled by Heath.

VE2QO

Bruce Balla was awarded number 12 DXCC RTTY. Bruce was the first VE station to attain this honor. He also holds the honor of being first VE2 to gain DXCC-CW, DXCC-phone and WAZ-CW. I wish to extend my congradulations to Bruce. The West Island Amateur Club is indeed fortunate to have Bruce as their President and editor of their fine newsletter.

UTAH

The need for a comfirmed contact with the state of Utah is the goal of many RTTY Amateurs. I would like to get some input from RTTY Amateurs to see if enough RTTYers need this state for WAS. I will make a trip to Utah in July 1980 and can take some RTY equipment and put out Utah. I know some DX stations who need it for their last state on WAS. Drop me a line and list stations you know need it. I hope to get enough interest and make the trip.

R.A.T.E.

The newcomer to RTTY is indeed puzzled at sometime or other and turns to other RTTYers for help. Many RTTYers live long distances from one another and in some cases are the only one in the state or country. The term R.A.T.E. means Radio Amateur Teletype Elmer. What is an Elmer? This is your buddy who helps in your hour of need, this is a stranger who meets you on the air and helps straighten out a project not working too well. Elmer is a Ham that helps those just starting out. Radio Amateur Teletype Elmer is what the JOURNAL is trying to accomplish with the Ham Helps section. I think we at the JOURNAL can do more I would like to hear about your RATE I would like to create the RATE of the month in my column. I want to encourage others to become a RATE and give acknowledgement to those who set aside their own projects, and operating time to help others. This has always been the spirit of Amateur RTTY and now is the chance to give a small "thanks" to your R.A.T.E.....

WOODPECKER

In past columns I requested RTTYers write to "the watch officer" monitoring Branch FCC, Washington, DC 20554 and report interference from the Russian "Woodpecker". Senator Barry Goldwater, K7UGA of Arizona inserted in the Congressional Record. President Dannals of ARRL wrote a letter to President Carter about this intentional interference. Please do your part and write also.

VK6 SCOUT JAMBOREE

The 12th Australian Jamboree will be held on Dec.29 to January 7th 1980 Several Amateur stations will be on the air including RTTY.

QST

The last few months RTTY is becoming more and more visible in QST, Keep up the letters. In future conventions speak out about RTTY, make your voice heard. December QST has a fine article on RTTY which may cut down on demand for repeater pairs. Small clubs could band together with divergent interests and share costs.

PIX

I have promised myself for sometime to start collecting RTTY pics. I have started to monitor the pic net and have a super collection started. If anyone has a copy of the "British Spitfire" and will make me a copy I will pay any expenses incurred. I monitor 20 meters at a frequency of app. 14090. At present I cannot send tape but would like to hear from the picture gang.

I hope everyone had a nice Christmas and a Happy New Year. The new year will bring the RTTYer more challenge. The RTTY JOURNAL is trying to bring to you the reader a better magazine each and every month. Please help and send your input, newsletters, articles and yes even your gripes. The best to all in this a new year.

So long for now, George.....

Deutscher Amateur Radio Club.....

SCHEDULE: March 15,1980 1100-1700 G
May 10,1980,1100-1700 GMT
Sept.,27,1980,1100-1700 GMT
Nov., 15,1980,1100-1700 GMT

BAND: The recommended portions of 10 meters.

CONTEST CALL: CQ CORONA TEST.

EXCHANGE: RST/QSO-Nr./Name.

POINTS: Each station has to be contacted only once. Each complete 2xRTTY-QSO is worth one point.

MULTIPLICATOR: a) use the WAE and DXCC ;list and each district in W/K, VE/VO and Vk.
b)each different prefix.

SCORING: TOTAL MULTIPLIERS times total number of QSO's.

CLASSES: A Single or multi OP.
B- SWL.

LOGS: Must contain name, call and full address of participant/class/time in GMT/exchange/final score. SWL's apply to the rules accordingly.

DEADLINE: Each entry must be postmarked within 30 days after each te

MANAGER: Klaus K. Zielski,DF7FB, PO 1147,D-6455 Erlensee, West Germany.

PLAQUES: To leading stations in each class.

THE MS-5, A QUICK AND CLEAN PERSONALIZED RTTY ID

NEIL PETLOCK, K9WRL AND
JOHN LAKE, WA9TIM.

Micro processors, EME, UAR/T's, Active filters, Oscar, all those neat little devises in such small packages. What ever became of CW, and vacuum tubes and all that stuff I under stood when I first started in Ham Radio? Well it's still there and just as interesting, but there is a whole new generation of electronics which is even simpler than the old way. Since this article is pointed basically at the RTTY operator or those who are about to take the plunge in RTTY let me explain the object of all this preamble. How often in your on the air time do you ID? Well look at your last QSO and count if you are not convinced. Some RTTY machines have a mechanical answer back drum, with a limited number of characters, but not all. How would you like to be able to produce at one touch of a switch your call, name, location, any combination of 31 characters you choose? It's easy and possible all because of those little black bugs called IC's.

If you are not yet into RTTY and still reading, continue for a bit and I will tell you why you should be. The cost of digital technology is coming down for everyone. The large and small business at one time used a lot of TELETYPE equipment, but they are converting from the 5 level machines to the 8 level machines used as input and output terminals for their computer needs. This means that more and more equipment suitable for the amateur RTTY is available and the cost is coming down all the time.

This weekend project will give you a more complete state of the art RTTY station, more efficient operation,and an increased working knowledge of those friendly little bugs. In addition, this ID is a snap to interface with the popular ST-5, ST-6, DT-500, and DT-600 terminal units, and d any UAR/T system. How does it ork you say? Let's see.

The speed of your RTTY motor is controlled by the 60Hz. of the AC mains or a governor. This speed is then divided by replaceable gear sets, to give either 60,75, or 100 words per minute operation. This gives a constant standard speed so two or more machines can accept data from each other. They are thus synchronized. A clock is used in this and many other circuits to provide a correct output rate for the electronically generated data so it will synchronize with the other elements in the system in this case the RTTY machines.

The clock circuit in the MS-5 is based on the popular 555 chip and the frequency determining components (pots R1, R2, and R3) which are switched selectable for the standard output rates of 60,75, or 100 WPM. Normal clock operation is obtained by installing the 555 and it's associated components on the board as shown in the schematic. If an external clock is used, the 555 is not installed and a Jumper is connected from N to P on the board. If you do not use an external clock initially, but anticipate the latter use of one, it might be wise to use an 8 pin socket for the 555 so it can be easily removed from the circuit at a later date.

IC3 is a divide by eight followed IC4 which is a divide again by 10. This divided output of IC4 is used to count the positions on the next chip, the PROM, and is in effect like the speed reducing gears in your RTTY machine. IC5, the PROM (programable read only memory), is the heart of the MS-5 RTTY ID and is a Harris 8256. The first of the 32 bits of information is stored blank and the remaining 31 bits are coded in 5 level binary code to provide your selected call, name, location, Etc. IC7 is a dual J K flip flop and controls the output of the PROM. When pins 2 and 6 of IC7 are forced low by actuation of the ID switch the following takes place: Both flip flops are reset, the PROM count is returned to 00000 and the 555 clock is enabled from pin 8 of IC7. IC4 supplies the binary count to 15 and then returns to zero. For this reason the eighth bit on position 15 of the PROM is coded to read high when position 15 is read and pin 9 is forced high which toggles the second of the IC7 flip flops. Pin 14 of the PROM is now forced high and causes the PROM to count from position 16 to 32 on the next count cycle of IC4. Pin 14 is held high until the ID is complete. When the count reaches 11111 bit 7 of the PROM goes high resetting the first flip flop of IC7 to an idle condition.

IC6 converts the parallel data output of the PROM to serial form that is useable in the RTTY system. The clock input is required for timing and is supplied to pins 1 and 2 of IC6 so the output will synchronize. Inverted and non-inverted outputs in serial form are available on pins 7 and 9 of IC6 respectively.

INTERFACE OPTIONS: We mentioned earlier that the MS-5 RTTY ID was compatable with a large number of RTTY terminal units and UART systems. As you read remember that we are going to key the FSK or AFSK generator and produce local copy as well. Producing local copy with the TU in standby is the heart of the problem.

Let's first consider operation with a terminal unit.The 2200 ohm resistor between the output of the 741 op-amp, and the base of the loop keying transistor is removed. The output of the op-amp is now fed to the base of Q1 through the 47K resistor R7. The switch normally used to put the TU in standby is disconnected from the TU and is then used to control pin 1 of IC9A and pin 5 of IC10B. When in standby the output of IC10B (pin 6) is now forced high and held.This gives a high on pin 10 of IC10C and allows pin 9 to control it's output. The ID output from IC6 is supplied to IC9A through the L to M strap and then to pin 9 of IC10C. The output of IC10C (pin 8) is supplied to the base of the loop keying transistor to print local copy of the ID. In receive the ID is disabled because pin 1 of IC9A is held high so IC9A's output is always high regardless of the input to pin 2. The receive signal from the 741 op-amp passes through

the Q1 buffer, IC10A, to pin 4 of IC10B. Since pin 5 of IC10B is held high in receive the signal at pin 4 controls the output at pin 6. This controls pin 10 of IC10C and therefore its output which is fed to the base of the loop keying transistor.

Operation with a UT-4 or UT-2 is similar to TU only operation with the following exceptions. Pin 2 of IC9A is tied low by connecting the K to L strap and pin 7 of IC6 is left floating at M. The noninverted ID from pin 9 of IC6 is tied to pin 4 of IC8B and pin 5 of IC8B is fed from IC-ID pin 8 of the UT-4/2. The output of IC8B pin 6 is then fed to the base of the loop keying transistor to produce local copy and an FSK voltage to key the UART input as in Fig. 3 point "E".

One last interface option is available with or without the use of a UART, IC5 will provide a high pulse on the second to last character of the ID. IC8A is inserted as a buffer and its output can be used to trip CW ID, reset a timer or what ever you choose. Also, provisions were made on the MS-5 for an on board +5V regulator if +5V is not already available in your TU. A 10 ohm 2W resistor should be placed in series with the 12 volt line.

CONSTRUCTION: The 555 can be put in a socket if external clock operation is ever anticipated, and the PROM should be put in a socket to allow for changes in the ID program. The only alignment required will be to set pots R1, R2, and R3. The clock speed is set by connecting a frequency counter to pin 3 of IC2 (the 555 clock). The frequency read will be the baud rate; 45.5 for 60 WPM, 56.9 for 75 WPM, and 74.2 for 100 WPM operation. Adjust pots R3, R2, and R1 to obtain these baud rates and you are finished. If a frequency counter is not available, the clock can still be set by running the ID into a RTTY machine operating at the correct speed for each pot being set. Determine the limits of each pot setting which will provide complete copy and set the pot at the mid point of the limits.

Most parts are available from electronic parts stores or mail order houses. Once you have finished the PC board and have accumulated all of the parts, construction will take about 2 hours. Arrangements have been made with Datapro, 3029 N.Wilshire Lane, Arlington Hts., IL 60004 to supply the PC board for $6.00 or the complete kit with PC board and programed PROM for $24.95, add $1.00 for shipping. Include info you wish programed into the PROM.

Normal construction practices were followed: burned three fingers with the iron and installed two resistors in the wrong holes so out came the solder wick and pliers. Other than that it goes together in a snap and plays.

SIMPLIFIED STEP BY STEP HOOK UP

Refer to Figures 1,2,3, and 4.

TU HOOK UP ST-5, ST-6, DT-600, DT-500 Etc.

1. On your TU, Remove the 2.2K (red red red) resistor between the op-amp 741 and the keying transistor (2N5656 -MJE 340, 2N3739 or equivalent) C and B figure 2.
2. Strap L to M on RTTY ID board.
3. Wire pin 12 of RTTY ID edge connector to base of Keying transistor mentioned in step 1 above. (Point B of Figure 2).
4. Wire pin 10 of RTTY ID edge connector to output of the op-amp mentioned in step 1 above. (Point C of Figure 2).
5. Remove TU stand-by line. (Point H of Figure 2).
6. Wire stand-by switch to pin 9 of RTTY ID edge connector.

UAR/T HOOK UP UT-4B AND UT-2B

1. Strap K to L on RTTY ID board.
2. Disconnect Rec side of TU and UAR/T connections now in service.
3. Wire pin 13 of RTTY ID board edge connector to base of keying transistor in TU. (Point B Figure 2).
4. Wire pin 14 of RTTY ID edge connector to UART output. This was connected to base of keying transistor before step 2. (See Point F Figure 4).
5. Wire pin 12 of RTTY ID edge connector to rec input of UART. This was connected to the TU op-amp output before step 2. (See Point E Figure 3)
6. Remove TU stand by line.(Point [illegible] of Figure 2).
7. Wire stand by switch to pin 9 of RTTY ID edge connector (See Figure 1).

INTERFACE DIRECTIONS

NOTE 1. To input from pin of op-amp (Figure 2 Point C). Omit 2200 ohm resistor.

NOTE 2. For external clock strap N to R and omit IC2 (555 timer).

NOTE 3. For straight terminal unit operation strap L to M. For UT-4/2 operation strap K to L.

NOTE 4. For TU operation tie A Figure 1 to point B Figure 2.

NOTE 5. For UT-4/2 operation tie D Figure 1 to point B Figure 2. Tie point A Figure 1 to point E Figure 3. Tie point F Figure 4 to point G of Figure 1.

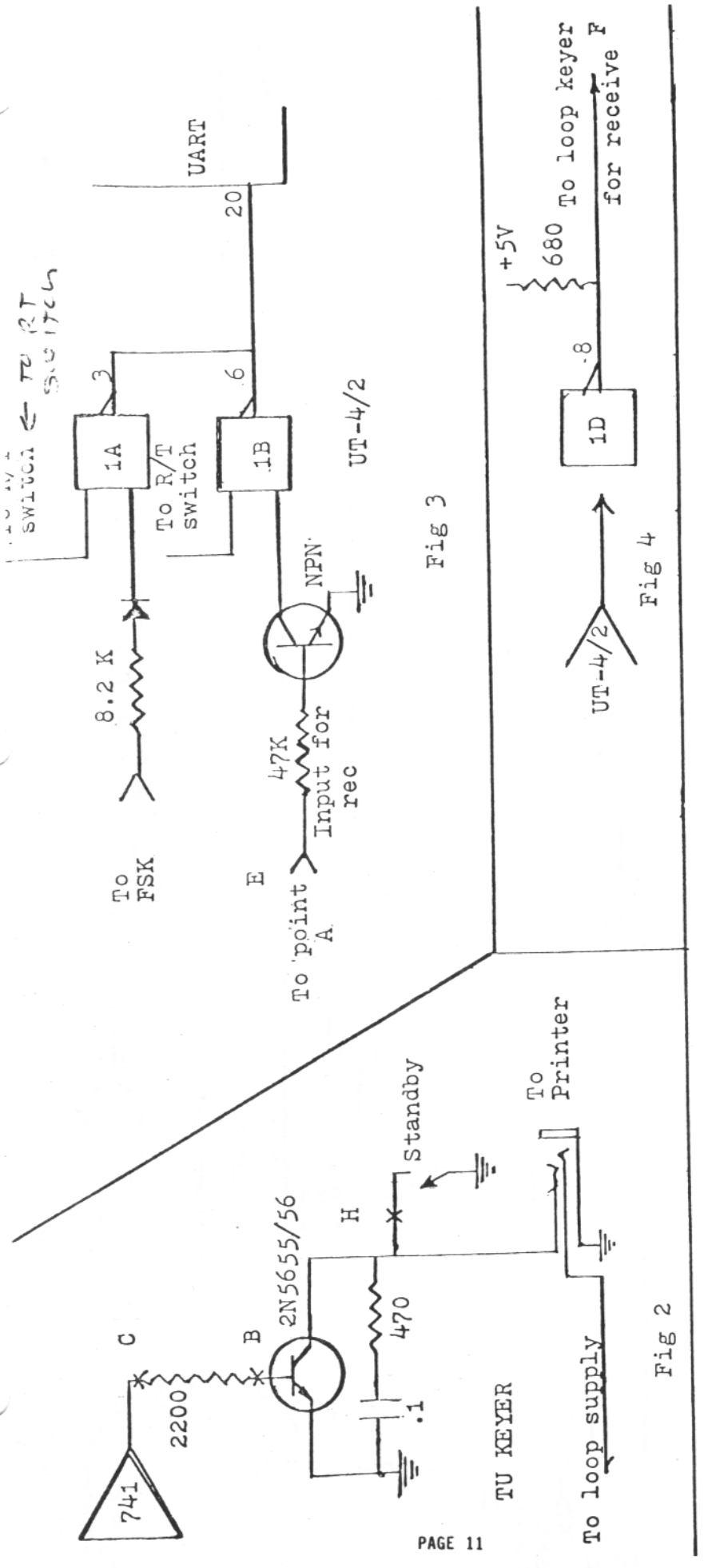
NOTE 6. Cut at point H Figure 2 and connect to pin 1 of IC9A, Figure 1. THIS APPLIES TO ALL MODES OF OPERATION.

NOTE 7. On UT-4 units the speed of the ID should be the same as that of the printer. On UT-2 units the speed of the ID should be the same as the output speed. (PRINTER AND OUTPUT SHOULD RUN AT THE SAME SPEED).

NOTE 8. All chips should be bypassed with .01 capacitors.

CONNECTIONS FOR OPERATION (TU ONLY)

EDGE PIN #	FUNCTION
1.	Common to clock rate selector switch
2.	100 WPM switch position
3.	75 WPM switch position
4.	60 WPM switch position
5.	External clock input (optional)
6.	ID start switch (ground to initiate.
7.	+5V regulator input
8.	+12V input (only needed if no +5V reg available)
9.	to stand by switch (ground to transmit)
10.	input from 741 op-amp output on TU
11.	ground



12. base of loop keying transistor
13. not used,for TU operation only
14. not used,for TU operation only
15. high output at RTTY ID completion.

CONNECTIONS CHANGES FOR UT-4 OR UT-2 OPERATION

12. input to 47K resistor on UT2/4
13. base of loop keying transistor
14. to pin 8 of IC1D of UT-4/2

ALL OTHER PINS ARE CONNECTED AS ABOVE

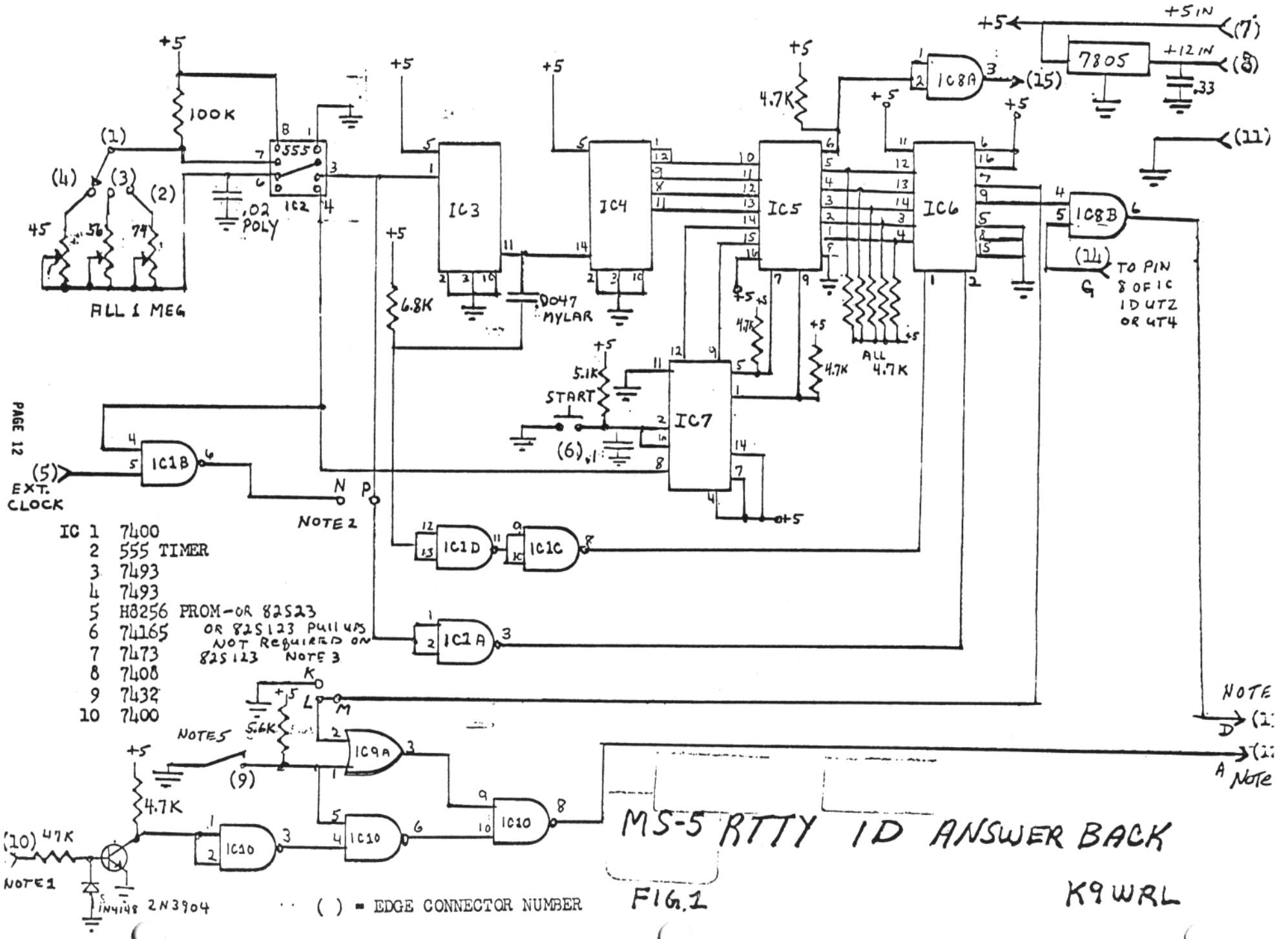
NOTE: SOCKETS ARE INCLUDED FOR THE 555 TIMER AND THE PROM.

parts are optional and are not included in standard 5 volt single speed kit.

**3 pots are used for multi speed operation this kit is single speed unit therefore only one pot is enclosed See parts layout for location of single speed pots (60, 75 or 100).

PARTS LIST

RESISTORS ALL ¼ WATT	
9	4.7K
1	5.1K
1	5.6K
1	6.8K
1	47K
1	100K
3**	1 Meg Trimpots
CAPACITORS	
1	.0047 Mylar
10	.01 DISC
1	.02 Polystrene
1	.1 DISC
1*	.33 Mylar
IC'S, TRANSISTORS AND DIODES	
2	7400
1	7408
1	7432
1	7473
2	7493
1	74165
1	82S23 or 8256 PROM
1	555 Timer
1*	7805 Regulator
1	2N3904
1	1N4148
1	PC board
1	15 Pin edge conn
1*	4-40 Screw
1*	4-40 Nut
1*	Heat sink
1	16 Pin socket
1*	8 Pin socket



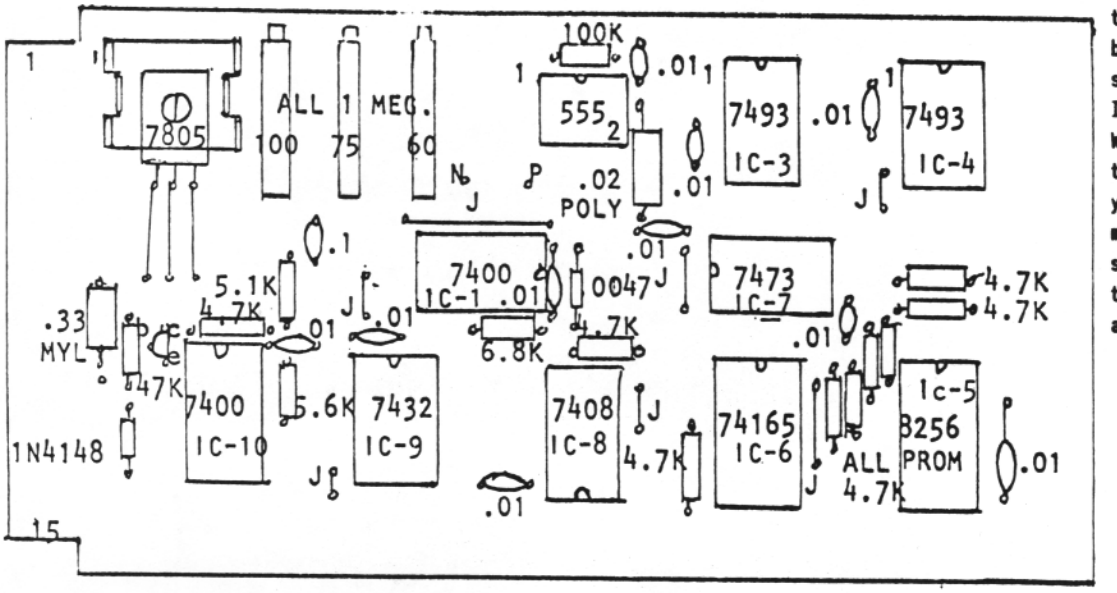
MS-5 RTTY ID ANSWER BACK

FIG. 1

K9WRL

PARTS LAYOUT FOR THE MS-5 RTTY ID GENERATOR

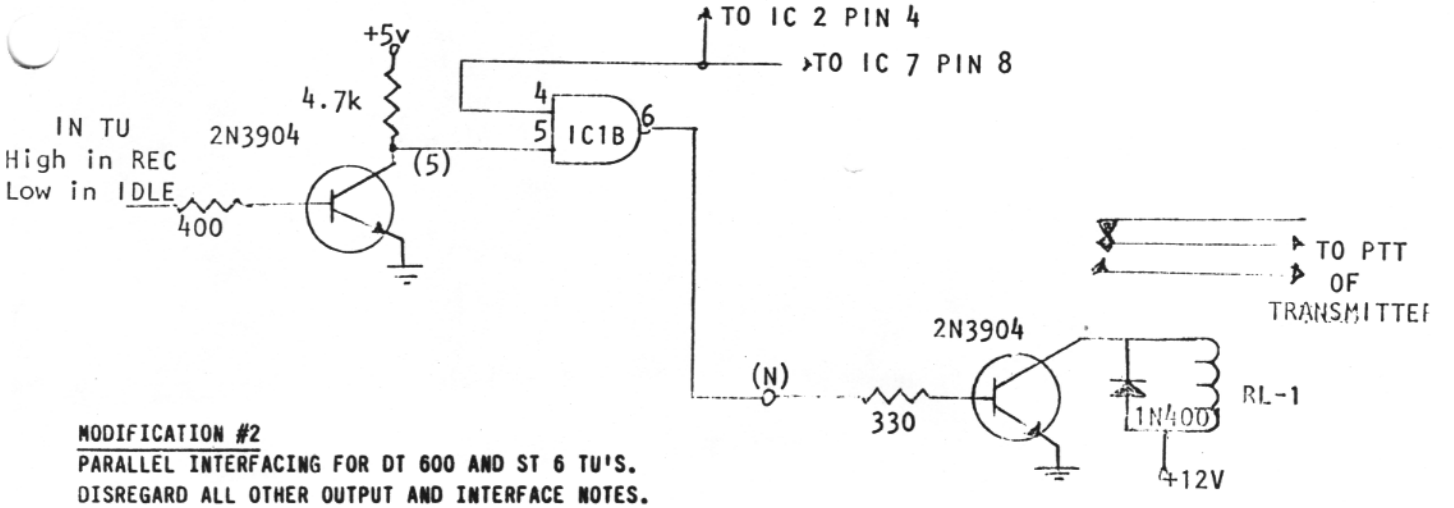
*INDICATES MYLAR CAPACITOR.



HIGH IS REC SIGNAL PRESENT LOW IS TU IN IDLE CONDITION.

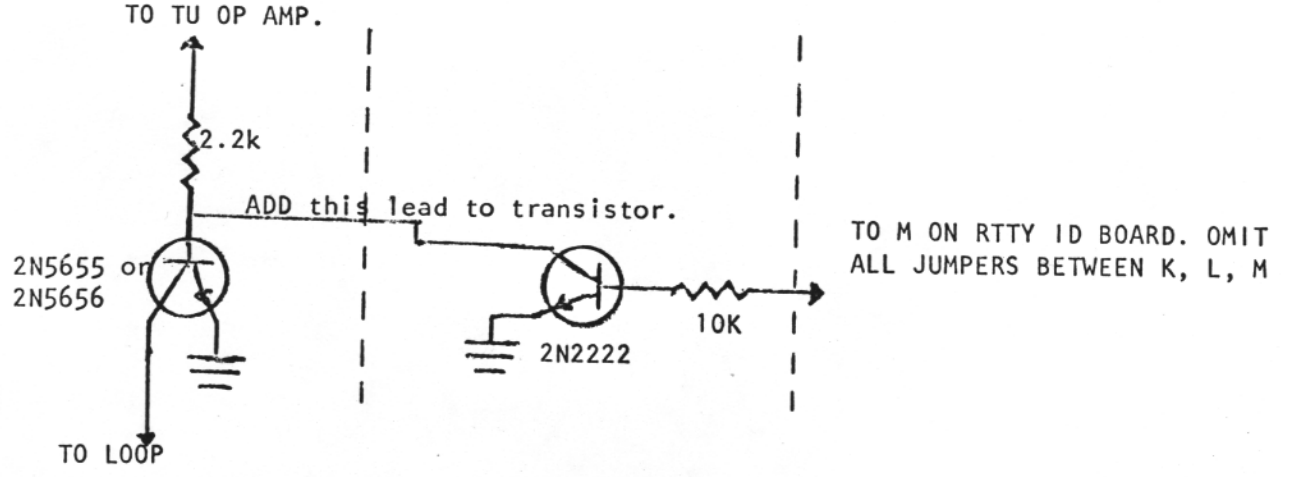
MODIFICATON #1

Tpyical RTTY answer back hook-up for transmitter turn on. Some sort of stunt box or selective calling should be used to trip off ID by a receiving station. Wire pin 5 of edge connector to plus 5 volts or if you wish to have receiver monitor option wire as shown below. Wire point N to transmitter PTT control as shown.



MODIFICATION #2

PARALLEL INTERFACING FOR DT 600 AND ST 6 TU'S.
DISREGARD ALL OTHER OUTPUT AND INTERFACE NOTES.



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HIGH QUALITY & LOW COST!

The DS2000 KSR FROM HAL

HAL design experience now makes it possible to offer you an efficient, reliable, and cost effective terminal for your RTTY or CW station. Investigate the new DS2000 KSR from the people who KNOW HOW to build RTTY and CW equipment. See how you can get great performance and save money too!

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- *24 line display*
- *2 programmable "Here Is" messages*
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- *QBF and RY test messages*
- *Word mode operation, full screen buffering*
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- *Morse code receive (optional) self tracking speeds from 1-175 wpm on a separate plug-in circuit board (Available June, 1979)*
- *All in a convenient, small cabinet (14.1" x 9.25" x 4.35")*

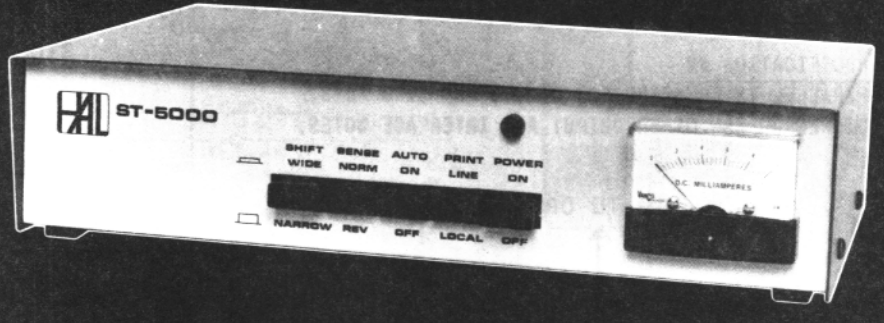
Price: $449.00

Optional Morse Receive Board: $149.00
Optional 9" monitor: $150.00

BIG PERFORMANCE

SMALL SIZE. . .SMALL PRICE

If you're looking for an RTTY demodulator with great performance on both the HF and VHF bands, take a look at the ST-5000 from HAL. The use of active filters with no phase-lock loop or 'single-tone' short-cuts ensure the kind of performance you expect. Full features in an attractive and conveniently small package make this demodulator a value that's hard to beat!



- *Hard limiting front end*
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- *Attractive, small cabinet (2.75" H x 8" D x 12" W)*
- *Fully assembled and tested*

Price: $225.00

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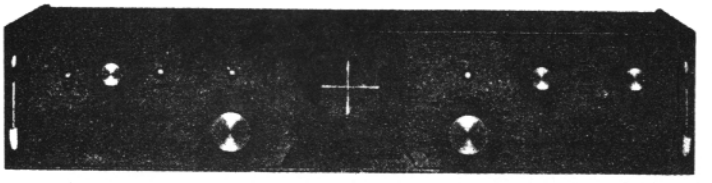
DOVETRON



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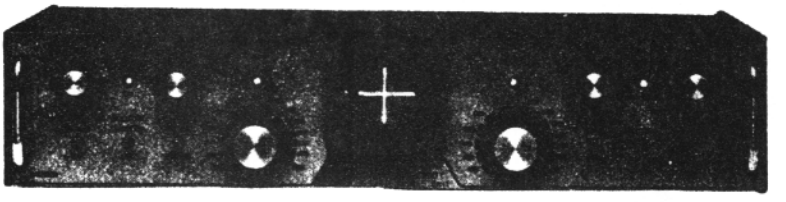
Multipath Correction
In-Band Diversity &
AFSK Tone Keyer

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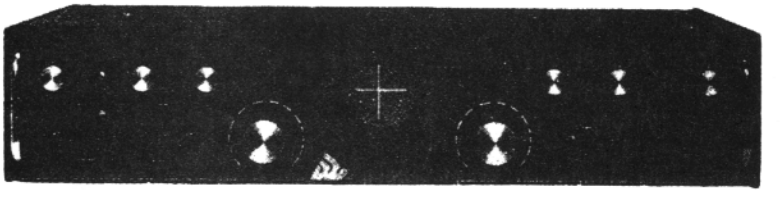
A front panel switch permits internal TSR-200 Signal Regenerator-Speed converter assembly to electronically "gear-shift" between 60, 67, 75 and 100 WPM. All incoming and outgoing signals are regenerated to less than 0.5% bias distortion. Also available with DIGITAL Autostart (TSR-200D): Amateur Net: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



MPC-1000R/-TSR-500

Dual UART Regeneration,
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Char. Memory, Word Correction & DIGITAL
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Amateur Net: $895.00*

The MPC-1000R/TSR-500 provides Preloading and Recirculation of the 200 character FIFO Memory, a keyboard-controlled Word Correction circuit, Variable Character Rate, Tee Dee Inhibit, Blank/LTRS Diddle, a Triple Tone-Pair AFSK Tone Keyer and a Character Recognition/Speed Determination DIGITAL (DAS-100) Autostart module.

***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**

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

DOVETRON

627 FREMONT AVENUE
(P. O. BOX 267)
SOUTH PASADENA, CA. 91030

MPC-1000R BY DOVETRON

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

THE MPC-1000R REGENERATIVE RTTY TERMINAL UNIT

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

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

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

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

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