RTTY JOURNAL

March 1979

VOLUME 27 NO 3

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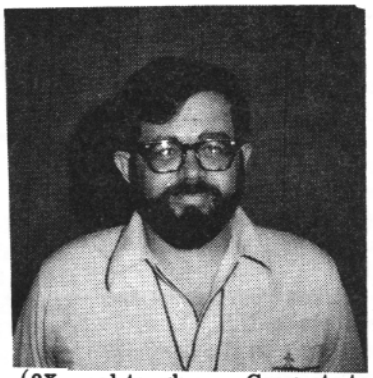

Greetings to all...

I recently received the December 78 copy of "AREWISE" the official Publication of the Australian National Amateur Radio Teleprinter Society. This rapidly growing publication is excellent with articles on mieros, VARTS and news in general about members and RTTY. I found no information on joining their organization but have their address:

The Secretary
c/o W.I.C. 14 Atchison Street
Crows Nest, N.S.W. 2065
Australia

From "AREWISE" was one note of interest to the DX'er.

ZE1CE is a very interesting station, it is a repeater in Rhodesia, but you can work through it if you know how. The frequency is 14075KHZ, and you have to challenge it to work through it such as...ZE1CE - S DE VK2SG 1614Z 78/11/12 R CQ DE VK2SG - SYDNEY in SYDNEY K DE VK2SG NNNN.

If there is any one around they will then answer you through the repeater. It is a bit slow working that way, and if you can hear the station direct you may then work on the frequency but you do not give the time and date, nor do you finish up with NNNN. The repeater will remain quiet until you challenge it again. It will receive any message for you and store it for 24 hours. After the 24 hours it erases the message but retains your callsign and the callsign of the station that you called and informs you that there has been a message. This is working DX a different way, slow, but different. You must try it sometime "AREWISE."

Klaus K. Zielski, DF7FB, P.O. Box 1147 D-6455 Erlensee 1, F.R.G. has taken over the chores of the traffic manager of the DARC for RTTY - purposes. Klaus is looking for information that he can use in his local bulletins and publications. Send anything that you can to assist Klaus in his new endeavor to the address above.

Bruce Frahm K0BJ now settled aboard the ship "Yankee Trader" (we hope) writes,"the ship "Yankee trader" will be leaving the Bahamas on 15 February for her 9th world cruise. Three hams will be aboard, K5UC, N1DX (ex HS2B1G/KA6DX) and myself, K0BJ ex WA0TAS. I haven't met the other hams in person yet and this note is not speaking for their plans, only mine. I will have TS820, remote VFO, Kleinschmidt TTY and ST5000 TU for RTTY, and will be using dipoles, and possibly a beam antenna for IMM and DX operations during Feb. 15-Dec. 15 1979. I may also guest operate at some stops.

Enclosed is the 1977 itinerary, which will be similar to our route and dates for this years cruise, but not identical. I have marked operations that I intend to make with a dash in front of the name of the port, and many of the others will be possibly showing up. The main emphasis at many of the semi rare spots will be RTTY, and the other times will be given to CW, SSB, low band or whatever is felt is the greatest need from that area. It must be emphasized that this is a sightseeing trip, not a DX pedition and most stops are brief in nature, but when possible I will be trying to work a maximum number of feist ZS0'S. RTTY action will be at 090xmit, tuning up or down on transceive; CW will be around 025 QSX up/down or transceive and fone at low end of the bavels that for DX Spots. Shipboard operations will be largely 14313, 14265 14030 and 21360.

QSL's go to W0PAH with SASE/SAE IRC no contributions are solicited. I hold licenses for K0BJ/VP2V, K0BJ/C6A and VR6BJ. 5Z4 and CE0 are hopefully on the way, and many others will be applied for in person. Hope to work many of the guys this year from some interesting spots 73.

See Page # 13 Bruce"

John Wood WB2VTD claims first RTTY QSO with South Pole on 13 Jan 79 with KC4AAA. I am not sure but believe that other south pole stations have been worked. I worked KC4AAD but still have not received a QSL card from a year ago. Any takes that can top that one?

Here is another one that is a first, W1MX the M.I.T. Radio Society (Massachusetts Institute of technology) has now worked all continents on all FIVE bands that is a real tough one. Congrats to the operators at W1MX who have been K1MK (WA1RJX), W1XG (W2QHQ) WA2EYC, WB2CWQ, WB2MZE, WA4TTG, K85H, N0AL, and W0UC (WA0UCU) great work guys.

Contest logs were accepted for CARTG until 31 January 1979 due to the postal strike delaying the mails. May logs were returned to sender so it will be awhile yet until we get the results of the CARTG.

From Hal W9RY comes good news for those who might need a QSL card for QSO's with ON0NI. Sigge became a silent key in May of 1977. OH2LA now has Sigge's log books and QSL cards and will QSL to all. Don't forget the IRC's fellas and a note of thanks goes to Toivo Sorvali, Silmakiya 3, SF-00720 Helsinki 72, Finland.

The S.A.R.L. has set up a fund for handicapped hams in the names of Sigurd and Bjorn Mansnerus. Anyone wishing to donate to their foundation may do so by sending donations to SARL P.O. Box 306 00101 Helsinki 10 Finland.

Franco Fanti I4LCF, Via Dallolio n19, Bologna, Italy, writes:

"I do not remember if I have informed you of the good prizes offered by the I.A.T.G. for the Campionato Mondiale RTTY 1978 (score of BARTG - CARTG - SARTG - WAEDC - Giant RTTY Contest)."

"The first prize is the computer offered by the General Processor, a firm of computers of Florence, Computer called Child Z value Lire 700,000."

This prize is for the RTTY'er that has proved to have used home made equipment in the computer field in the contest RTTY or have introduced original modification in commercial equipment."

"This Campionato Mondiale RTTY 1978 is finished with the Giant Flash Contest (I am receiving in this moment the final score) and I ask your publicity on RTTY Journal for receive documentation for the computer prize."

"For the Campionato RTTY not is necessary submit documentation but for the computer prize is necessary this. Take note that not is important for this prize the position in the final score, but is necessary the prove of the use of this new

CONT. ON PAGE 4

CONT. FROM PAGE 3

techniques."

Many thanks in advance for your help. Best 73s" Signed Franco Fanti I4LCF.

Here is a listing of some of the active stations that have been worked or noted on the barrels during the past few weeks.

K4GMH/VQ9 on Diego Garcia QSL via his stateside QTH.

9V1SI has been worked from Europe and only heard very weak in the U.S.

YB0YE has been seen on the band (20 meters) but not very strong.

VE6GBU/SU has not been able to get on RTTY due to equipment problems. He has parts on the way from Germany so watch for Willie.

ON7AZ the only non-club station on from Artwerp his name is ETIENNE.

ON6IA a new one from Belgium name ANTON.

4Z4KB Ran has good signals from Israel.

SV1AB George QSL via box 564 in Athens.

OH0JN Ove. A new one and the only RTTY station from alnd Island.

5Z4RT Hermann in Germany only.

AL7J Ron from Anchorage with 599 sigs into Europe.

OD5JW Wassim in Lebanon.

GV5TU John very active with strong sigs on 10 mtrs.

Other stations printed were PY2YFG, DJ7YR, PA3AEI, DM2EDL, HB7NG, F5DE, XE2DH, ZP5CD, DK1BX, DZ2X, CP6EE, YV5ZZ, and CE3CF.

Inputs this month came from IS0ESS, WA3IKK, W3KV, K7BV, and W9RY.

73 de Skip.

HAM HELPS

Phillip Shaffer, 6815 N.E. 204th St., Bothell, Wa. 98011 needs information about how to build RTTY demodulators and getting started in RTTY in general. He also needs to know where to find parts for Model 19 and 15 machines and 11/16th in paper tape. Also paper for both friction and sprocket feed machines. He needs paper tape reader brushes desperately. Any one that can help him?

A.M. Fitzgerald, 14 Caruer Street, Springfield, Mass. 01108, Phone 413-734-4109 is interested in building a complete RTTY Station with a video monitor. He doesn't have a strong electronic background but wants to give it a stab. He also wants to include a morse code sender and receive it to show on a video monitor.

Donald Collins WA8, WQT, 412 Wooster Rd., Millersburg, Ohio 44654, would like to know how to transmit FSK with a swan 500CX using a HALST5.

Kontest Korner

BARTG 24th-26th March rules in Feb. 79 Journal
DAFG 5 May 1979 rules in Mar. 79 Journal
SARTG 18-19 August 1979
CARTG 20-22 October 1979
WAEDC 10th-12th November 1979

If any of the above are in error please write to me or give me a call on the telephone. Thank you. SKIP.

CQ DAFG - CONTEST

PLease note: Revised rules, effective from Jan. 1st 1979

GENERAL: The Deutsche Amateur-Fernschreib-Gruppe "DAFG" sponsors the 8th DAFG-SHORT-CONTEST 1979 and welcomes participation of all RTTY-Amateurs inside and outside Germany. There will be a SW- and a VHF-Contest. Both Contests will be scored separately. The Contest is split in 5 single-contests within the year. After closing the 5th single-contest, the winner of the year in each classification will be stated.

SCHEDULE:

SW:

1st part Saturday	January	20th, 1979 1300-1600 GMT
2nd part Sunday	March	18th, 1979 0800-1100 GMT
3rd part Saturday	June	09th, 1979 1300-1600 GMT
4th part Sunday	September	09th, 1979 0800-1100 GMT
5th part Saturday	November	24th, 1979 1300-1600 GMT

VHF:

1st part Sunday	January	21th, 1979 0700-1100 GMT
2nd part Saturday	March	17th, 1979 1200-1600 GMT
3rd part Sunday	June	10th, 1979 0700-1100 GMT
4th part Saturday	September	08th, 1979 1200-1600 GMT
5th part Sunday	November	25th, 1979 0700-1100 GMT

BANDS: Shortwave: 80 + 40 m VHF: 2m + 70cm

CONTEST CALL: CQ DAFG — CONTEST. After each QSO the station having called last keeps the QRG. The previous holder should make QSY. This QSY-rule is not (not) valid for the VHF-part!

EXCHANGE: SW: RST / QSO-number (start with 001) / Name / QTH
VHF: same as SW, in addition: QTH-locator.

SCORING: Each station may be worked once per band.

SW: Each complete QSO counts 1 point on 80 + 40 meters.

VHF: Each complete QSO counts at 2 meters per each 10 km's one point, at 70 cm's per each 10 km's distance 3 points. Each different prefix, per each band will be counted as a multiplier. Contacts via repeaters are not (not) valid.

FINAL SCORE: Total of QSO-points multiplied by total of multipliers.

CLASSIFICATIONS:
SW:
Class A: SW-stations above 200 watts input
Class B: SW-stations up to 200 watts input
Class C: SWL-stations
VHF:
Class D: VHF-stations

LOGS: must contain: SW: a) Call / Name and complete address of participant (use block letters, please)
b) Classification
c) GMT / Call, Name, QTH of Partnerstation / RST and QSO-number sent and received / Band used / number of prefixes
d) Final score (logs without final score will count as checklog)
VHF: a) to d) same as SW
e) QTH-locator sent and received
SWL: For points, multipliers and scoring confirm as above. The same station may be reported maximum 5 times. Instead of Message received Info, the SWL should report Call of partnerstation (wkd).

RESULTS: The results will be published in the news-bulletins of the DAFG, in RTTY-magazine, in the DARC-magazine and foreign courtesy publications.

DEADLINE: Your Log should be in the hands of the Contest-manager not later than 20 days after closing each single Contest. Each later incoming Log will count as a checklog only. All decisions are final.

CONTEST-MANAGER: Klaus K. Zielski DF 7 FB P.O. Box 1147 D - 6455 Erlensee 1 West Germany.

8th SARTG WORLD WIDE RTTY CONTEST 1978 RESULTS

Class A Single Operator

CALL	QSO's	Points
I3FUE	287	298,540
IT9ZWS	251	247,845
K3KD	214	214,825
F9XY	240	240,800
HB9AVK	212	233,225
SM6GVA	246	232,815
W3FV	199	217,350
KØBJ	203	211,640
SM6ASD	206	207,260
DT3YSO	181	182,700
I7FKO	197	170,000
EA8IY	174	164,745
I2OLW	188	151,585
K8NN	171	151,470
DT2EDL	159	150,060
DF2KU	182	147,060
W9RY	172	146,160
DL2XP	151	140,180
WA9BOW	158	136,000
G3RED	170	133,835
SM4CNN	161	126,000
SM5EIT	144	120,815
I2DML	138	107,730
W4CQI	143	103,740
I5HZZ	131	102.845
ISØRUH	143	100,920
DK1BX	120	100,800
DJ2YA	116	95,265
DJ6QT	113	90.560
OH2ZY	135	86,435
K6WZ	108	78,080
WA6WGL	110	73,815
IØLVA	107	72,300
SM6AEN	107	68,685
OH6YI	151	66,400
JA7ML	100	58,500
CE3MA	90	54,530
DJ2YE	75	50,740
YV5GU	78	48,530
LU3EQ	74	45,305
W3KV	75	44,220
YO2TS	83	40.500
VE2QO	118	38,280
IV3PVD	81	37,835
DL6WZ	74	35,070
DT6AK	78	29,260
SM6CAL	71	26,250
WA6CQW	61	24,840
ZS6AKO	88	23,490
VE7DTA	61	23,345
W5HEZ	65	21,980
VE7DLX	64	20,020
DT3CF	74	19,865
F2PY	53	19,180
JA2JHR	57	17,955
OZ2X	46	17,760
I1EPJ	61	17,030
LA7AJ	60	16,770
HB9HK	67	16,100
DM5VVL	51	16,050
G3HJC	40	15,840
EA4XW	60	15,640
DM2DLE	73	15,120
DM5XNN/P	49	14,980
SM7BGE	50	14,445
VK2SG	50	14,155
WB5QBY	50	13,750
G3RDG	51	13,200
SM7MO	51	12,740
WØMT	41	11,375
OZ1BGQ	47	11,340
DL8WA	48	11,125
OK2BJT	37	9,625
EA6EQ	52	9,350
LA2IJ	34	9,020
9M2CR	40	8,960
SM6BUV	43	8,925
DK5GG	25	7,375
K4YSB	30	7,290
EA3AZX	37	7,110
K5EV	27	6,405
JR2TZL	34	6,240
DL1OY	28	6,175
DM4MF	57	6,000
3D6AD	35	5,200
DM2CHD	39	4,800
WB2VTD	25	4,270
WB2WZX	24	4,125
DM4SDA	25	3,675
LA8SA	29	3,240
DZ8GA	21	3,000
DM4VDA	18	2,960
TF3US	22	2,800
DJ1XT	14	1,485
DM3YF	16	1,400
DM2BCD	19	980
K8UFW	12	900
W8TCO	10	900
G4EDR	12	840
SMØIIB	11	735
PAØKFF	9	700
JRAG	12	675
VK8HA	5	300
W8GKW	5	125

CLASS "B" MULTI-OPERATOR

I5MYL	209	244,925
DLØTS	196	183,150
LZ2KRR	197	182,150
I1COB	180	153,655
G3UUP	165	152,800
DM3CM	158	146,150
DKØCW	135	99,450
OH1AD	136	99,000
OH1AR	149	97,650
OZ7SAC	106	67,925
YO3KWA	124	60,720
HA5KBM	109	57,330
TF3SB	123	54,200
VE3OCU	87	33,635
OK1KWN	50	16,200
IM5LG	40	9,750
G3K6GX/6	22	3,000

SWL's

F. Rossi	229	218,550
OK1-1L857	208	209,700
Niendorf	215	206,640
G8CDW	104	72,600
Wustner	154	70,265
DM-8987/K	93	53,805
DM-7111/A	96	46,560
OK2-21478	162	32,965
OK1-20677	103	32,640
Schonwalder	101	16,540
DM-8747/7	20	3,280
DM-2814/M	16	1,920

Check logs..Many thanks to: K7GW, W6JOX, ISØESS, DT2GRO, ISØYPW, I3RUF.....

21 1/2

21 CONT.

THE RTTY JOURNAL offers the RTTY Merit Award for single band WAC, the award is in the form of a certificate and is issued free upon presenting proof of contact to the QTH at the head of this column,WB6-CYA,. As of the end of 1978 the Award has been following Amateurs.

WAC 3.5MHZ

W1MX

WAC 7.0 MHZ

DLØTD

W1MX

WAC 14.0 MHZ

K3SWZ
WØMT
W5RYA
DJ8BT
SL5AR
DK4ZF
JH1TFF
I3-13-018
DJ1QT
W4ZLH
VP2MRW
F6ALL
K4YZV
W7JWI
SM6AEN
W1MX
W9OEQ
K6WZ
G3ZWW
DL8VX
W3EKT
WØJCO
PY2CYK
WB9LUK
WA6WGL
WB4TPU
K4GJW
DL8QP
I8YRK
G3YDR
I1PYS
LA2IJ
JA7ML
G3HJC
W8JMG
K1LPS
WB4VUP
W1GKJ
VE2QO
K4ZS
OHØNI
WAØYDJ/4
K4VDM
G4ALE
GW3IGG
K4JAFWA9AKT
W6JOX
JA4ONZ
BRS-18456
G3IIR
N3AI
I5HZZ
I5GZS
I2OLW
I5KPK
SM5EIT
WA8CZ8
WA9BOW
B. Niendorf
K4RN
ISØESS
K5GH/W5KHP
HB9AVK
WB6CYA
I2WEG
WB2VTD
WA6CQW
K.Wustner
KØHSC

WAC 210 MHZ

WØMT
DJ8VX
SM6AEN
K6WZ
W3EKT
WA6WGL
W6JOX
W4YJ
I5WT
HB9AVK
SM5EIT

WAC 28.OMHZ

FG7XT
WA6WGL
DJ8BT
W1GKJ
W6JOX
HB9AVK
SM5EIT

WORKED ALL STATES

K3SWZ
W2PLQ
K4YZV
FG7XT
W1GKJ
W4CQI
WA8NGJ
W9OEQ
I8AA

DXCC Listing as of 1 Jan 1979

1. ON4BX
2. W3KV
3. I5KG
4. ON4CK
5. W5QCH
6. W8CQ
7. WA3IKK
8. DK3CU
9. W5EUN
10. G6JF
11. W2LFL
12. I5ROL
13. W4YG(K7BV)
14. W3DJZ
15. JA1ACB
16. K8YEK
17. I5WT
18. W1GKJ
19. W4CQI
20. DL8VX
21. K6WZ
22. W3EKT
23. W8JIN
24. W4EGY
25. I8AA
26. K3SWZ
27. OK1MP
28. W5VJP
29. K4YZV
30. K7BV
31. F6ALL
32. F5JA
33. HB9AVK

From the Publisher.

Hi gang.. lots of new news. First of all you will notethat George Hammond, WA6CQW has taken over Chuck, W6MNO's column. Chuck will be missed and I am sure that we all would like to thank him in person. Chuck has retired now and will be moving a-round more so you all never know when he will pop-upin your neck of the woods.
John Goheen III will be taking on some of the editors work. John usu-ally answers to the name of "Jay" around here as his father is also a John but John the elder just happens to be the guy I married recently. Jay has been in the Navy and retired recently with lots of electronic and printing experience. John(my guy) is retired from Scott Paper Company and now helps (?) me with the Journal.He answers most of the mail and puts the JOURNAL into the proper mail bags when it is time to mail the JOUR-NAL to you.
So hello to the new guys on the block... Take care and enjoy to the past Editor of Hits and Misses,Chuck. We all will miss you.

Hope tosee all of you in Dayton, April 27, 28, 29, 1979. RTTY-ers gather at the Imperial House North.

As ever,
Dee Crumpton-Goheen
Publisher

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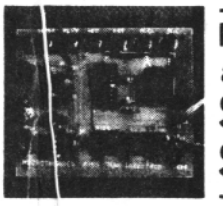

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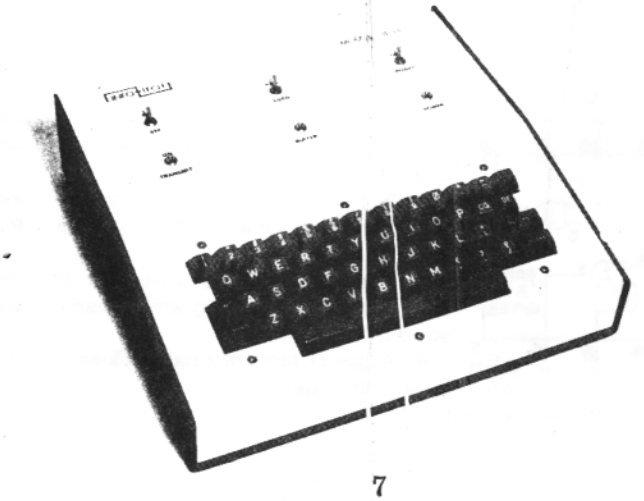
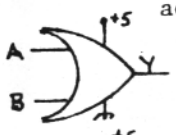


BY ROBERT P. BALIN

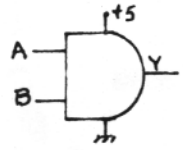
Data Processing Quiz

Digital circuits are becoming important in the control circuits of ham radios: in keyers, in channel selection switching, in repeater controllers, in memory devices and others. The output is simply a change in the D.C. level of the output connection, usually from a near-zero level, called "Low" or "0", to a level of a few volts, called "High" or "1". There are no in-between levels. Outputs are of small current but can drive other logic, diodes or transistors, which can supply "muscle current" of high amperage.

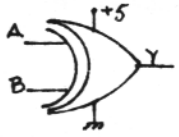
Symbols have been developed to show "gates", a place where a comparison is made to either output High or output Low. (TTL circuits operate from +5VDC, added here to each gate.)



An "OR" gate. Normally outputs a "0", but outputs a "1" when either (or both) input "goes high".

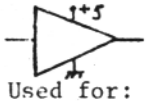


An "AND" gate. Normally outputs a "0", but outputs a "1" when both inputs go high.

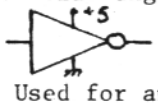


An "EXclusive OR" gate. Normally outputs a "0", but outputs a "1" when either input goes high, but if the second input goes high also, the status reverts back to "0".

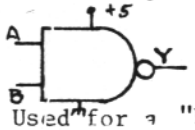
Other equally important logic building blocks are the following:



Used for: Amplifiers Buffers Shapers

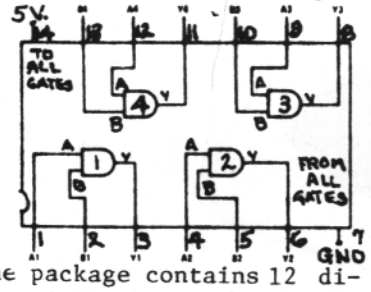


Used for an "Inverter". Output High, goes Low on High input.



Used for a "NAND" gate. Output High, but goes Low if both inputs High.

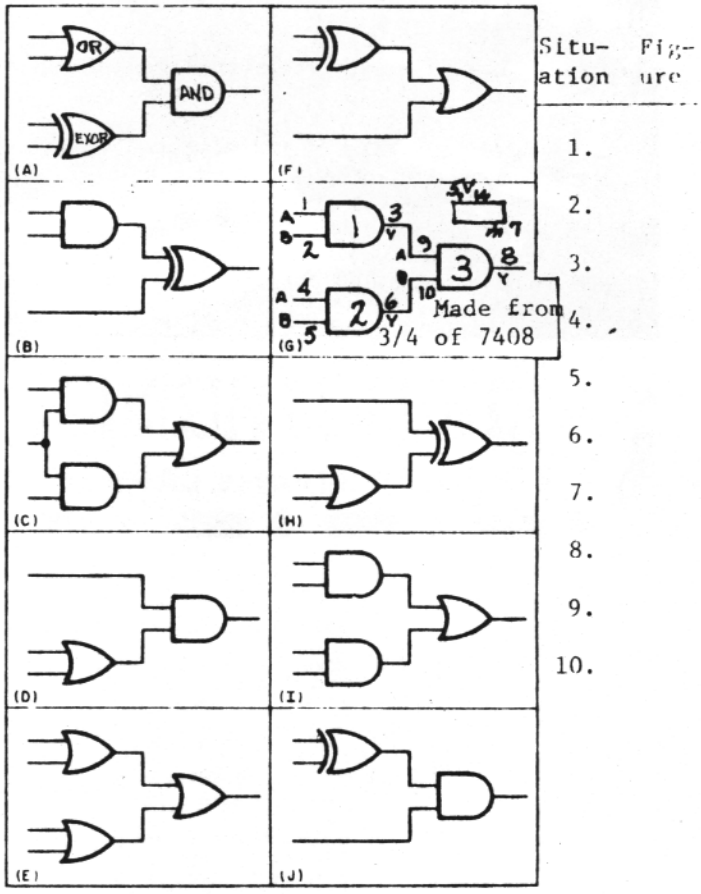
Because these circuits are simple and very low powered, they can be small and packaged together. Here are 4 2-input AND gates in a "Quad" package.



7408
Quad 2-input AND Gates.
Size: .75 x.25 x .130 in.

Actually the package contains 12 diodes, 24 transisitors and 20 resistors. And it's among the simple ones!

---by K6KH



Situation	Figure
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

Digital logic circuits are designed to handle the "and" and "or" relationships that exist not only in mathematical processes but in everyday life as well.

To test your ability at understanding logic, see if you can match the following common situations (1 to 10) with the analogous circuits (A to J).

1 To win a prize you must send in a coupon and also get at least one of the questions right.

2 Today's luncheon special consists of a ham sandwich with either soup or a salad, but not both.

3 You can paint the walls blue or pink but paint the ceiling white, even if you don't do the walls.

4 A pair of Jacks or a pair of Queens will win the hand.

5. They will rent the apartment to a couple or a single person, but not to both.

6 On this TV set, you can get the sound and picture separately or together on channel 5, but the sound only on channel 8.

7 To get in, you must have $4.00 and either, a discount card or come up with another dollar.

8 You must attend at least one morning or afternoon session of either day of the conference.

9 If you take a course in Law or Sociology, or both, you must also take one in either English or History, but not both.

10. You can play doubles at tennis there; but if a player on either team fails to show up, the game is called off.

---POPULAR ELECTRONICS NOV. '78

VHF RTTY NEWS

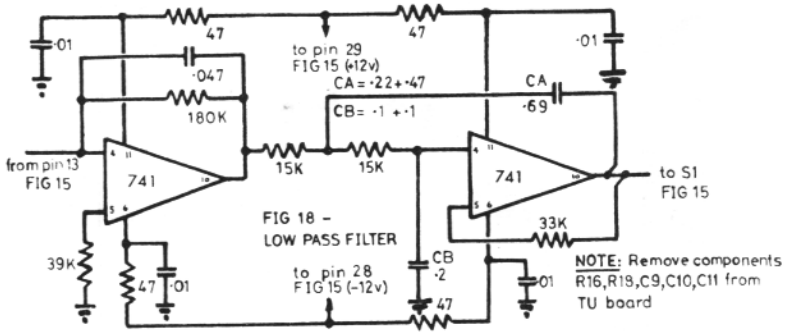
Arny Gamson, K6PXA, 8034 Gentry

N. Hollywood, CA 91605

RTTY bartg newsletter journal of the British Amateur radio teleprinter group

Of all the improvements that can be made to a simple TU, inclusion of a good post detector lowpass filter is likely to give the most marked difference in copy of poor signals. The theory is that as a 45 Baud RTTY signal transmits all its information in the spectrum DC to 22 Hz a lowpass filter, of cut-off frequency say 25 Hz, wired immediately after the detectors will not remove any wanted signalling information but will attenuate unwanted higher frequency components i.e. noise, QRM etc. The basic ST-5 TU does contain a simple RC lowpass filter (R17, R19, C11) but it leaves a lot of room for improvement. The circuit below is adapted from the ST-6 design. The input, output and power connections refer to figure 9 of the second edition.

425 shift — The modification is very easy. Simply remove C2a (0.033 pF). C2 (9.1 pF) in parallel with L2 results in a calculated resonance within 4 Hz of the desired 1700 Hz. It is appreciated that such a simple step cannot produce an ideally balanced discrimination but because of its simplicity, possibly including a single pole switch to make the TU "dual shift," makes the modification worthwhile.



The following are the most used manuals for the 28 ASR & KSR TTY;

BULLETIN NUMBER	CONTENTS	PRICE
217B	28KSR ADJUSTMENTS AND LUBRICATION	$15.40
235B	28TD ADJUSTMENTS AND LUBRICATION	6.30
247B	28 REPERF ADJ. & LUB.	12.70
250B	28ASR KBD BASE & PERF ADJ. & LUB.	11.10
295B	MOTOR UNITS, COMPLETE MANUAL	4.75
1149B	28KSR PARTS	14.70
1161B	28TD PARTS	4.50
1167B	28 REPERFORATOR PARTS	8.45
1169B	28ASR PARTS	14.20

If you order the whole "shootin' match," it is advisable to ask for UPS COD Shipment. Order from:

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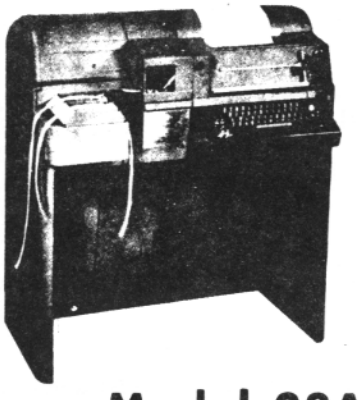
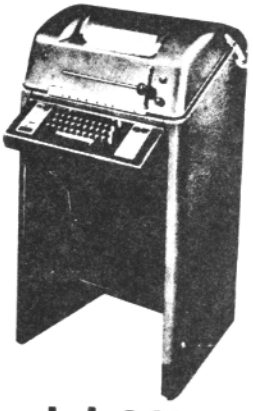




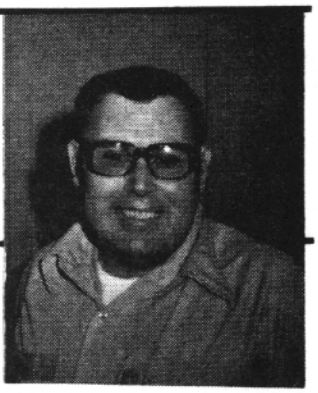
Model 28ASR Model 28KSR

WA6PMA DOUG

HITS & MISSES

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

FROM
THE
MAILBAG



With the beginning of this issue I will be writing the HITS and MISSES column. It will be my pledge to bring you, the readers, an informative column. But this requires INPUT, so let me hear from you. "Happiness is a full mailbag."

Being the new kid on the block, let me introduce myself. . . . . I was born 47 years ago in St. Louis, Missouri and moved to San Diego in 1947. My XYL's name is Jeanne.

I have a degree in criminology and currently hold the position of forgery fraud investigator in the San Diego Police Department. In 1958 I earned my ham license and in 1965 I became interested in RTTY and have been hooked ever since.

At present, I use the Kenwood TS820S along with a Swan Tribander beam, Info-Tech TU M200 and M300 keyboard with video display. I generally use low power (40 watts) and try to participate in most contests. I have numerous other pieces of RTTY equipment such as; HAL ST5, TU Swan linear, etc. . .I won't bore you with a list of give the XYL a check list on where the money goes.

I was very happy to hear that Arny, K6PXA is on the mend. Hopefully he will soon be able to make the long drive to the San Diego Teleprinters Society meetings again. Get well, Arny and come see us.

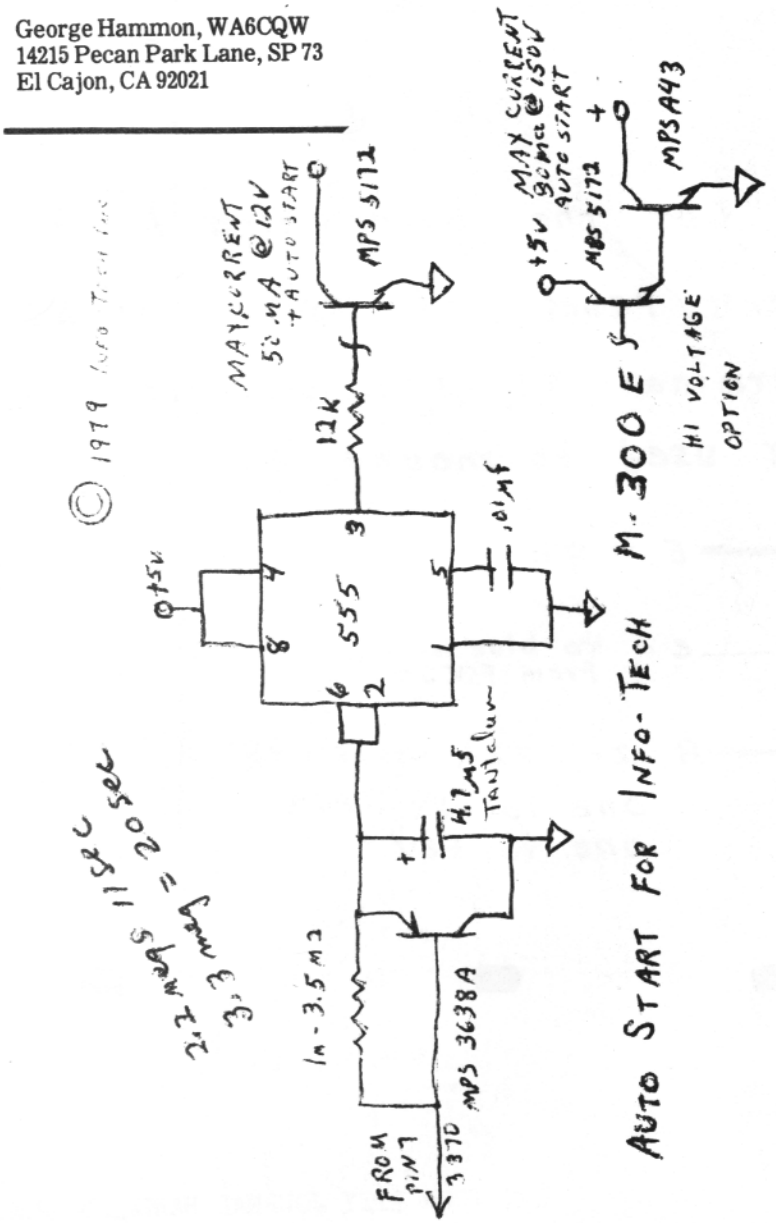
Speaking of the San Diego Teleprinters Society, the new president for 1979 is Bob Smith, WB6ODR. The Teleprinters conduct meetings each fourth Tuesday of the month at the Bonanza Steak House, 8105 Clairemont Mesa Blvd, San Diego.

The first week of the new year the XYL and I drove over to Las Vegas, Nevada to attend the midwinter Consumer Electronics Show. We really enjoyed it. I chatted with many hams and stopped by the ARRL booth to put in a pitch for RTTY. I spoke with Leonard Norman about the chance of the SAROC ham convention starting up again and was left with an optimistic opinion that it well may. Also, I noticed that Hy Gain and Nutronics were in attendance and the size of the show was fantastic. The range of electronics devices on display would keep you drooling for days. The show program listed over 300 exhibitors. I spent over half an hour trying to find a parking place.

Dee, our publisher, is looking for articles, not only for the Journal but also for the RTTY Handbook. So sharpen your pencils and submit your articles. In the last few weeks I received some nice notes from many of the RTTY club stations in Europe. Many included photos along with their QSL cards. So let me hear from you.

So long for now, George.

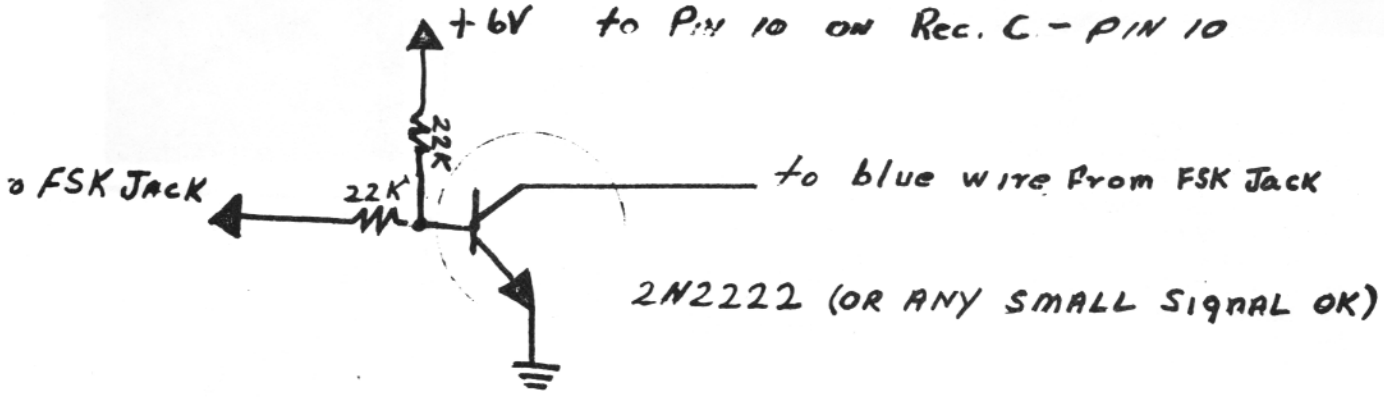
George Hammon, WA6CQW
14215 Pecan Park Lane, SP 73
El Cajon, CA 92021



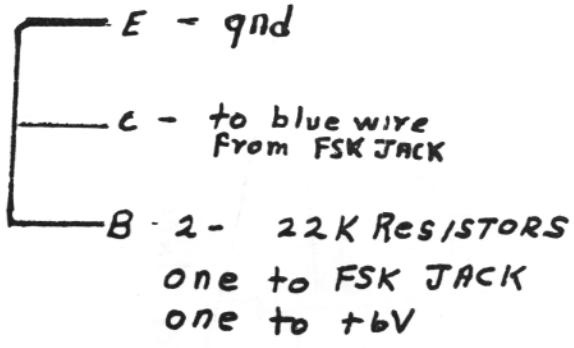
ADDITIONAL SCHEMATIC FOR INFO-TECH M-300 TRI-MODE KEYBOARD.

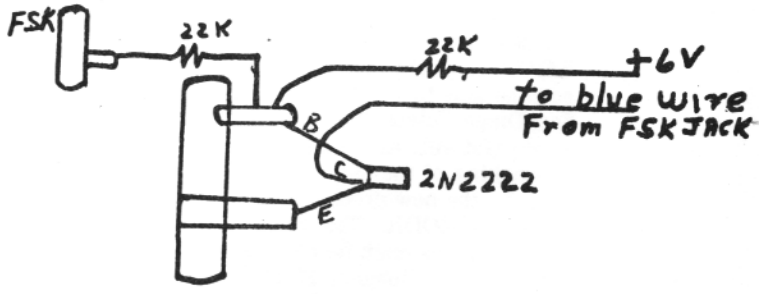
INVERTER FOR YAESU FT 901 DM

PETE HARRIS, WB1CRG
18 VERA ROAD
COVENTRY, RI 02816



Cut the wire going to the FSK Jack on the back panel and insert the Above. There is a terminal strip below the FSK Jack which can be used to mount the components





PETE WB1CRG

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M/V YANKEE TRADER'S 1977 ROUND THE WORLD CRUISE ITINERARY

by Rowland S. Wilson

Cruise Day	Time Kept Off GMT	Port No.	Time & Date of Arrival	Days in Port	Port	Time & Date of Departure	Naut. Miles	Days at Sea	Av. Spd. (kts)	Total Naut. Miles
1	-5	1			-Freeport, Bahamas	1715 15 Feb	572	2.68	8.89	
4-6	-5	2	0905 18 Feb	2.06	Cap Haitien, Haiti	1108 20 Feb	189	0.96	8.21	572
7	-5	3	1008 21 Feb	0.25	Port Au Prince, Haiti	1602 21 Feb	980	5.64	7.23	761
13-22	-4	4	0730 27 Feb	9.38	Fort DE France, Martinique	1640 8 Mar	112	0.57	8.19	1741
23	-4	5	0620 9 Mar	0.53	Admiralty Bay, Bequia	1910 9 Mar	444	1.74	10.65	1853
25-27	-5	6	1250 11 Mar	2.08	Kralendyk, Bonaire	1255 13 Mar	752	3.18	9.86	2297
30-33	-5	7	1710 16 Mar	0.44	Cristobal, PCZ	0345 19 Mar	50	0.42	4.96	3049
33-37	-5	8	1350 19 Mar	4.14	Balboa, PCZ	1715 23 Mar	657	3.72	7.36	3099
41-48	-5	9	1125 27 Mar	6.79	-Guayaquil, Ecuador	0616 3 Apr	2419	9.10	11.07	3893
57-59	-6	10	0837 12 Apr	2.41	-Easter Island	1841 14 Apr	1139	4.57	10.37	6175
64-65	-8½	11	0828 19 Apr	1.43	-Pitcairn Island may stay 3-4 days this year	1840 20 Apr	1205	5.56	9.03	7314
71-76	-10	12	0806 26 Apr	5.63	Papeete, Tahiti	2320 1 May	95	0.43	9.16	8519
77-78	-10	13	0942 2 May	1.10	Port de Fare, Huohine	1212 3 May	25	0.11	9.15	8614
78-80	-10	14	1456 3 May	1.64	Uturoa, Raiatea	0610 5 May	30	0.18	6.95	8639
80-84	-10	15	1030 5 May	3.85	Vaitape, Bora Bora	0700 9 May	619	2.97	8.52	8669
87	-10½	16	0630 12 May	0.47	Avarua, Rarotonga, Cook Island	1750 12 May	757	4.07	8.80	9288
91-93	-11	17	0805 16 May	1.89	-Pago Pago,Tutuila,Am. Samoa	0625 18 May	83	0.35	9.76	10045
93-96	-11	18	1455 18 May	2.63	-Upolu Is.,Apia Harbor,W. Samoa	0602 21 May	663	2.72	10.15	10128
	-12/+12		2400 22 May		International Date Line	0000 24 May	(23 May omitted)			
99-104	+12	19	0019 25 May	5.70	-Suva, Fiji	1700 30 May	608	2.64	9.58	10791
107-109	+11	20	0725 2 Jun	1.81	Vila, Efate, New Hebrides	0250 4 Jun	70	0.32	9.00	11399
109	+11	21	1036 4 Jun	0.19	Sesaki,Anchorage,Emae(Mai) Is.	1505 4 Jun	28	0.19	6.00	11469
109-110	+11	22	1807 4 Jun	0.25	Foreland Anchorage,Ile Epi	0001 5 Jun	92	0.36	10.70	11497
110-111	+11	23	0803 5 Jun	1.34	Santo, Espiritu Santu	1656 6 Jun	652	2.88	9.42	
114-116	+11	24	1407 9 Jun	2.09	Honiara,Guadalcanal,Solomon Is.	1618 11 Jun	936			11589
120-127	+10	25	1835 15 Jun	6.93	-Port Moresby,Papua New Guinea	1700 [illegible]	[illegible]	4.10	9.52	12241
128-129	+10	26	1725 23 Jun	0.59	Dalrymple Islet	[illegible] 22 Jun	243	1.02	9.95	13177
132-133	+9½	27A	2009 27 Jun	0.52	Fannie Bay [illegible]	0740 24 Jun	834	3.58	9.69	13420
133-136	+9½	27B	0958 28 Jun	3.35	[illegible] Bay, Port Darwin, Austra.	0840 28 Jun	7	0.05	5.36	14254
140-141	+8	28A	1742 5 Jul	[illegible]	Port Darwin, Australia	1815 1 Jul	976	4.02	10.11	14261
141-148	+8/+7	28B	1025 [illegible]	0.68	Harbor Entrance, Benoa, Bali	0956 6 Jul	5	0.02	10.00	15237
152-153	+7½	29A	[illegible] 6 Jul	7.24	Benoa Port, Bali	1605 13 Jul	1035	4.25	10.24	15242
153-168	+7½	29B	2200 17 Jul	0.49	Eastern Roads, Singapore	0944 18 Jul	1	0.03	1.60	16277
170-173	+7½	[illegible]	1022 18 Jul	15.22	-Inner Harbor, Singapore	1540 2 Aug	397	1.71	9.70	16278
		30	1040 4 Aug	3.18	Penang also possibly HS + 9N1 during this time	1505 7 Aug	1312	6.11	8.94	16675

M/V YANKEE TRADER'S 1977 ROUND THE WORLD CRUISE ITINERARY
by Rowland S. Wilson

Page Two

Cruise Day	Time Kept Off GMT	Port No.	Time & Date of Arrival		Days in Port	Port	To Next Port: Time & Date of Departure		Naut. Miles	Days at Sea	Av. Spd. (Kts)	Total Naut. Miles
							[illegible]	23 Aug	411	2.06	8.25	17987
179-189	+5½	31	1550	13 Aug	9.98	Colombo, Sri Lanka	1540	[illegible]		5.99	8.69	18398
191-193	+5	32	1530	25 Aug	2.03	-Malé, Maldive Is.	1615	27 Aug	1288	[illegible]	[illegible]	19686
199-204	+4	33	1455	2 Sep	5.11	Mahé, Seychelles	1737	7 Sep	951	4.64	8.53	[illegible]
209-218	+3	34	0850	12 Sep	9.11	-Mombasa, Kenya	1505	21 Sep	565	3.01	7.83	20637
221-222	+3	35	1515	24 Sep	1.21	Mutsamudu, Anjouan, Is. Comaro Islands	2010	25 Sep	85	.48	7.34	21202
223-224	+3	36	0745	26 Sep	0.90	Zaudzi (Dzaoudzi) Is Mayotte, Isles de Comares	0520	27 Sep	741	3.45	8.95	21287
227-229	+3	37	1605	30 Sep	1.73	Tulear, Madagascar	0630	2 Oct	1574	7.14	9.16	22029
236-248	+2	38	0920	9 Oct	12.20	Cape Town, So. Africa	1402	21 Oct	1705	7.71	9.20	23603
256-257	0	39	0605	29 Oct	1.49	-Jamestown, St. Helena	1750	30 Oct	1770	7.90	9.34	25308
265-272	-3	40	1320	7 Nov	6.76	Recife, Brazil	0740	14 Nov	2096	8.38	10.42	27078
280-284	-4	41	1547	22 Nov	3.93	Port of Spain, Trinidad	1402	26 Nov	103	0.56	7.73	29174
285-287	-4	42	0322	27 Nov	2.03	St. Georges Harbor, Grenada	0405	29 Nov	37	0.21	7.40	29277
287-288	-4	43	0905	29 Nov	0.63	Hillsboro, Carriacou	0015	30 Nov	43	0.26	6.88	29314
288	-4	44	0630	30 Nov	0.46	Kingstown Bay, St. Vincent	1730	30 Nov	132	0.65	8.50	29357
289	-4	45	0900	1 Dec	0.42	Roseau, Dominica	1905	1 Dec	44	0.23	8.18	29489
290	-4	R/V	0030	2 Dec	0.05	Les Saintes Anchorage, Iles-des-Saintes	0140	2 Dec	73	0.39	7.85	29533
290	-4	46	1100	2 Dec	0.53	English Harbor, Antigua	2350	2 Dec	88	0.40	9.16	29606
291-292	-4	47	0928	3 Dec	1.31	Gustavia, St. Barthelemy	1650	4 Dec	14	0.07	7.77	29694
292-294	-4	48	1838	4 Dec	1.74	Philipsburg St. Maartens	1220	6 Dec	28	0.14	8.24	29708
294	-4	49	1545	6 Dec	0.36	Saba	1935	6 Dec	97	0.50	8.05	29736
295	-4	50	0738	7 Dec	0.40	- Port Purcell, Road Harbor Tortola	1708	7 Dec	12	0.06	8.18	29833
295-296	-4	51A	1828	7 Dec	0.60	- St. Thomas Bay, Virgin Gorda	0852	8 Dec	1	0.01	3.00	29845
296	-4	51B	0912	8 Dec	0.23	- The Baths, Virgin Gorda	1445	8 Dec	792	3.97	8.10	29846
300-302	-5	52	1403	12 Dec	1.43	- Nassau, Bahamas	0035	14 Dec	121	0.56	9.01	30638
302	-5	53	1400	14 Dec	-	Freeport Harbor, Bahamas	-	-	-	-	-	30759
					163 days in port	(30759 n.m. at 9.22 knots)				139 days underway		

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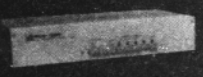
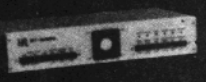


1974



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1977

1978

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- 24 line screen
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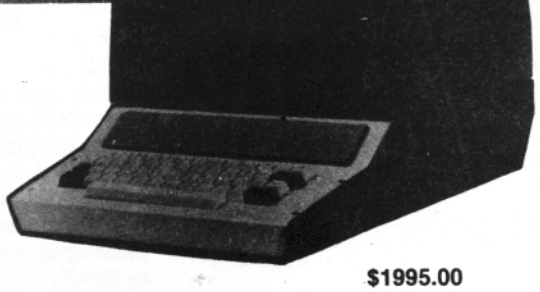
- WRU answer-back
- Upper **and** lower case ASCII



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THE DOVETRON SSD-100 solid state cross display replaces the conventional CRT and accociated high voltage power supplies as the tuning indicator in the MPC-Series RTTY terminal units.

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The new front bezel contains an anti-glare, optical filter and provides 30% more viewing area than the original CRT bezel.

A retrofit kit (SSD-100K) is available to update existing CRT-equipped terminal units in the field. Your inquiry will bring complete details by return mail. DOVETRON, 627 Fremont Avenue, (PO Box 267), South Pasadena, California 91030.

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

NS-1A PLL Demodulator W/T $26.95 ppd. Complete kit $19.95 ppd. SASE for info. Nat Stinnette Electronics, Tavares, FL 32778.

Bandpass active filter 2125/2295 Hz. Easily tuned. Requires +12v. Complete kit $11.95, W/T $16.95 ppd. Nat Stinnette Electronics, Tavares, FL 32778.

YOU NEED Information on Commercial RTTY Stations? News Agencies, Telex, Weather..on shortwave? I have up-to-date frequency, callsign, schedule, code lists. Write for details. Joerg Klingenfuss, Goethestrasse 14, D-7400, Tueingen 1, West Germany.

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HELP need information on wiring of 28ASR also schematic for the ST-5 or where one is available cheap. K80X0

CRYSTAL CONTROLLED XB-6 CLOCK BOARDS FOR THE UT-4. SINGLE SIDED PC BOARD HAS PROVISIONS FOR TWO CLOCKS FROM ONE CRYSTAL. MAY ALSO BE USED FOR NUDATA/DAYTAPRO UT4B BOARDS. BOARD SIZE 4½ x 6½ INCHES. PRICE $8.95 COMPLETE KIT $26.95. DAYTAPRO ELECTRONICS, (FORMERLY NUDATA ELECTRONICS), 3029 N. WILSHIRE LN., ARLINGTON HTS., IL 60004.

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COMPUTER HEATH H-8, 16K RAM, H8-5 serial-cassette I/O, H-S video terminal, documentation and software. $1,200, W. Serp, 4027 Harvey Ave., Western Springs, IL 60558 (312)246-7856.

NS-1A PLL Demodulator W/T $26.95 ppd. Complete kit $19.95 ppd. SASE for info. Nat Stinnette Electronics, Tavares, FL 32778.

BANDPASS ACTIVE filter 2125/2295 Hz. Easily tuned. Requires + 12 v. Complete kit $11.95, W/T $16.95 ppd. Nat Stinnette Electronics, Tavares, FL 32778.

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R390A's BY Collins and other manufacturers. Checked and aligned $250.00 and up (714)222-9446, WB6VBL, 1135 Alexandria Dr., San Diego, CA 92107.

TELETYPE MANUALS — Model 28ASR, 3-volume set $24.50 plus $1.00 postage. Manuals also available for Model 15, 19, 32, 33, 35, plus thousands of others on military surplus receivers, transmitters, test sets. Send 50c (coin) for large list. S. Consalvo, W3IHD, 7218 Roanne Drive, Washington DC 20021.

COMPONENT UPDATE. All UT-4 components and programmed Proms per January and February ads. Reprint of UT-4 Trouble-shooting articles (1976/77 Journal) $1.00 postpaid, courtesy airmail overseas. Peter Bertelli, W6KS, 5262 Yost Place, San Diego, CA 92109. 714-274-7060.

FACTORY ASSEMBLED ST-6/AK-1 AFSK with UT-4 terminal unit/speed converter/buffer. A real work horse and in excellent condition. $450 or best offer ppd. Write Dean Mellstrom, WB6JNV, 1612 Big Dipper Way, San Diego, CA 92073.

TU POWER Transformer. 115 volts primary, 250 volts center tap at 60 ma and, 28 volts center tap at 500 ma secondaries. $10, includes shipping. Midnight Engineering Group, P.O. Box 349, Galesburg, IL 61401.

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TH-5 TELETYPE TERMINAL UNIT REVISITED

This compact military unit, containing 15 tubes, supplied 20 ma of magnet current for a receiving and transmitting system operating on 1325 (Mark) and 1225 (Space) signals. It can be readily modified to receive and transmit with AFSK at 170 Hz shift in amateur service. Components are plainly marked, generally on two swingout boards mounted with screws. Instruments required to modify are a counter, an audio signal generator (use your receiver xtal calibrator, setting the tuning control for the desired audio frequency), a VTVM or multimeter and an open circuit phone plug. Capacitors used for tuning should be mica or mylar of 300 volt rating. All work is referenced with the unit upside down, front panel near you.

POWER SWITCH.
Remove the RING switch, clip all wires, insulate each end (daub with fingernail polish). Mount a SPST toggle switch in this hole and run one wire of the power cord through this switch.

TO CHANGE THE AFSK FREQUENCIES. (Right hand board).
1. Remove the R 50 resistor and replace it with a 1 megohm resistor A3-B3.
2. Remove C 36- bottom side A8-B8.
3. Remove C 34 A5-B5.
4. Adjust both screwdriver slots of C 30 to point toward the panel.
5. Connect counter to Posts 4W-S. Place function switches in 4W and SEND. Apply Power.
6. Add capacitors to replace C 34 to produce as nearly as possible 2295 Hz. About 1800 mmfd is required. Stop a few Hz above 2295. Adjust both sections of C 30 for 2295 Hz. Remove power.
7. Using the topside terminals A8-B8 replace C 36 with about 1900 mmfd. Insert the open circuit phone plug in a SEND jack. Apply power. Adjust C 36 for 2125 Hz as near as possible. C 30 varies both the 2295 and 2125 Hz signals so that you may be able to split a small (3-5) Hz difference. Turn off power.

TO INVERT THE AFSK FREQUENCIES FOR AMATEUR CONVENTIONAL SHIFT
8. On bottomside of right hand board, term B 10, cut and tape BLUE-WHITE wire (R 53).
9. Same board, term D 10, remove WHITE-ORANGE-BLUE wire and solder to term B 10 (R 53).

TO REDUCE THE OUTPUT LEVEL.
10. Jumper Posts E-4 (SEND) and E-6 (RCV) and ground.
11. Lift lead on E-3 (SEND); connect to one lead of 1/2 watt 510 ohm resistor. Connect 10 ohm 1/2 watt resistor to other lead of 510 ohm resistor and ground (E-4). Connection junction of two resistors to E-3. This results in about 15 millivolt output, if too high for your transceiver (using setting of mike control as reference), reduce the value of the 10 ohm resistor.

TO ELIMINATE CARRIER SUPPRESSION AND DECREASE DISTORTION IN AUDIO SIGNAL.
12. Remove tube V-11.
13. Clip R 46 from F-3 (bottom right hand board).
14. Remove R-69 (D16-F16 r.h. board). Replace with 1500 ohm 1/2 watt resistor.
15. Clip R-70 (D16-F16).
16. Remove jumper F4-D4 if installed.
17. Remove leads from Pin 6 of V 8, solder and tape.
18. Clip R 71, D14-F14, C-44 at A-26.
19. Tube V 15 serves no purpose and may be removed.

DEMODULATOR MODIFICATION (left hand board-power off).
20. Remove V 7 Tube and V 6 tube. this defeats the original purpose of neon lamp E 9 which now becomes a pilot lamp. It also eliminates the receive low signal gate.
21. Jumper U-7 to U-12. Clip R 23 at U-10, R 22 at U-7, R 30 at X14.
22. Install some type of binding post or test lead socket in one of the ventilation holes on the front panel above the RING switch side. Connect an 0.01 mfd capacitor to ground. Connect a 1 megohm resistor through a lead to terminal Z-9 (top or bottom of board).
23. Locate the two stacks of transmitting type capacitors on the right hand top side of the chassis. Remove the left hand board.
24. Remove both stacks. There are nuts on the bottom side, re-install the screws with the heads on the bottom side and nuts on topside. Be sure to use the insulating washers, flat washers and lock nuts. Mark on the chassis top, the designations C-14-C-15 and C 10-C11-C12.
25. Install the capacitor removed from C 12 (0.02 mfd) on the inboard screws marked C14-C15. Add a soldering lug between a pair of nuts on each screw on topside of chassis. Replace l.h. board.
26. Remove tube V 5.
27. Connect the audio generator and counter to terminals 4W-R.
28. Connect a DC voltmeter Positive (start with a high range setting) to the new test jack and ground. If a VTVM, offset the ZERO control to make the hand be about center scale. If a multimeter, watch polarity closely when the unit is turned on; reverse if necessary. Short or jumper the screws for C10-11-12 (outboard).
29. apply power. Set the audio frequency to about 2500 Hz. Increase the level until the meter responds to the signal.
30. Tuning the audio generator from a higher frequency, determine the resonant frequency peak by closely watching the meter. this is broad, but patience will allow determination within one minor scale division on the meter. The frequency should not be lower than 2295 Hz but as high as 2335 or so is acceptable. The 0.02 mfd capacitor may be added to if necessary. If the frequency peak is too low, then remove and build a stack to meet this requirement. Use as sensitive a meter range as possible. Watch your fingers, there are high voltages present and the AC voltages on the screws is high.
31. Turn the audio level to off.
32. Reverse the meter leads (multimeter). Remove the short from C 10 and place on C 14.
33. Connect an 0.02 mfd capacitor to terminals for C 10. Increase the audio level. Tuning from a higher audio frequency, determine the resonant frequency and adjust the value as necessary to obtain not higher than 2125 Hz nor lower than about 2075 Hz.
34. Remove the short from C 14. Vary the audio frequency carefully. The meter should read zero (crossover) at close to 2110 Hz. The maximum voltages-positive versus negative-should be similar but is not critical. Remove power, reduce audio level to zero.
35. If it is necessary to have more than 20 ma magnet current as for a Model 15-19, with magnets connected in series at 30 ma, locate the grey or black large size resistors in the center of the bottom of the chassis. Parallel resistors to make a total of 10,000 ohms of at least 10 watts and add to the left hand resistor.
36. Re instal tube V 5. Arrange to monitor the current at the receive jack.
37. Apply power (observe polarity of current meter-reverse if necessary). The current should be about 20 ma or 30-35 ma if modified. Insert the open circuit phone plug in one SEND jack. The current should drop to zero. If not, determine if the HOME COPY jumper is in place across D5-F5. If at some later experience with the TH-5 in use, the home copy does not work properly, parallel a 100,000 ohm resistor at R 41, B25-F25. Remove the phone plug.
38. Increase the audio signal input level. Vary from 2125 Hz to 2295 Hz. The current meter should change from some value to zero. At 2110 Hz, the meter may indicate a

CONTINUED

small current because the output tube is not operating as an ideal switch, however the magnets should have dropped out a current much above this value.

TO USE THE TH-5.

39. Connect the CONT leads to the PTT leads of your transceiver. Connect the 4W-R posts to the 500 ohm audio output. If only 8 ohms is available, insert a small 8 ohm voice coil to 500 ohm line transformer. Connect the 4W-S posts to your microphone input leads. Probably a new input plug is desirable. Observe ground leads and use shielded cable.

40. Plug your machine magnet plug into the RCV jack and the keyboard plug into the SEND jack.

41. This modification uses the transceiver in the Lower Sideband position for transmit and receive and is compatible with two meter FM.

42. For a receiving indicator, use the 'Flipping Line' type scope indication. Almost any scope should be useable. Set the horizontal sweep to show three or four intermingled 'X' shaped lines (120 Hz sweep or so) when you touch the vertical input with your finger. Connect the scope vertical input to the new test jack. Using a VTVM with the ZERO offset to center scale is also acceptable. With the receiver ausio gain at zero and the terminal unit operating, set the vertical gain control for about one inch positive deflection. Insert the open circuit plug in the SEND jack. The trace should momentarily jump negative about the same amount. Repeatedly hitting a keyboard key should produce a pattern of horizontal lines connected by random interconnecting lines. If the scope has a DC input, some of the jumpiness of an AC only scope input is reduced, but is not a requirement. To tune in a receive signal, center the horizontal lines about equally above and below a reference line, a meter should hover near zero. Receiving should be possible in either NORM or REC positions of the function switch. When printing, tune the desired signal from a high audio tone until it starts to print. This is because the TH-5 does not have a band pass filter system in it's input and harmonics of the received signals (if lower than the standard tones) can give erroneous outputs and only garble will print.

43. Activate your transceiver in the transmit move (LSB). Put the function switch in the SEND position. Adjust the mike gain control for normal drive level. This RTTY signal is equivalent to an AM signal so be careful of the power input to the transmitter.

44. In the SEND position, it should be possible to obtain local or home copy. If while receiving a RTTY signal, the machine goes into FIGS or LTRS, when not desired, reduce the receiver gain control to zero and operate the appropriate LTRS or FIGS key and the machine should return to the desired mode. If using separate receiver and transmitter and the receiver does not mute when the transmitter is on, it will be necessary to open the terminal unit receive input to obtain home copy.

PERFORMANCE

The characteristics of a TH-5 modified by W4YZ (AAM4YZ) are:

AFSK output frequencies — 2122 Hz and 2298 Hz, at 15 millivolts.

Input level to cutoff magnet current — 15 mv.

Input level to limit in amplifiers — 80 mv.

Straddle tuning 2210 Hz — narrowest shift giving print — 25 Hz.

Peaking signal input at 2125 Hz — narrowest shift giving print — 100 Hz.

Peaking signal input at 2125 Hz — print obtainable to at least 1000 Hz shift.

Modified TH-5 will normally stay in MARK except for extraneous signal effects.

Some of the preceeding was obtained from a variety of sources.

J.H. MCADAMS W4YZ (Army MARS AAM4YZ)

"SECOND LOOK AT THE YAESU FR/?/ RTTY CONVERSION"

Recently going through some older RTTY JOURNALS, I ran across an article by JA1BRK Tachio on conversion of the YAESU FR101 receiver mode switch to add the CW narrow shift (600 Hz) filter to the RTTY position (JAN 75).

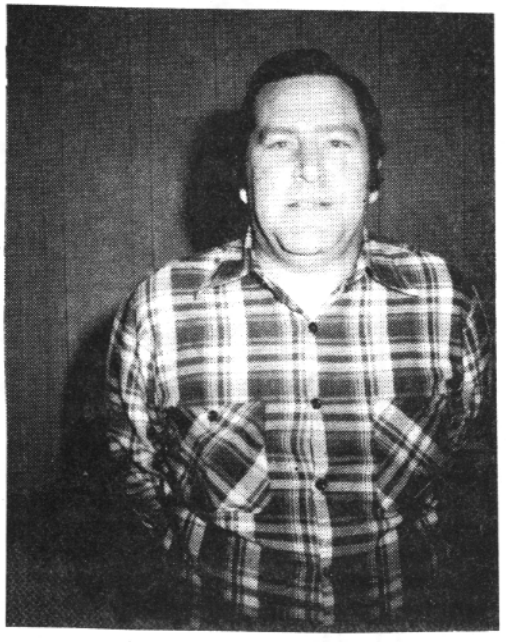
As any FR101 owner has probably noticed, the RTTY mode selector is wired to USB. This makes it difficult and sometimes impossible to receive correct RTTY without the aid of a normal-reverse network in the terminal unit. Step 1 in the diagram changes the RTTY mode selector to LSB instead of USB. At this point, also note that the RTTY mode selector position has a wider bandwidth window than either of the normal sideband positions. Step 2, though working in limited space, is quite simple and involves the addition of two short jumper wires. Note that in the YAESU FR101 Manual, page 18, the cutting of the jumper wire between pins 6 and 7 of S3C wafer switch is not clearly defined. This step is the last step in switching the narrow cw filter up to that also of the RTTY mode position. CW and USB operation is not lost as a result of this conversion.

After completion, which takes maybe a half-hour for us slow pokes, I found that my disbelief of allowing the cw filter to pass a RTTY signal because of its narrowness was soon put to rest. Note: RTTY space signals do not pass through the normal wired CW-NARROW filter position.

This conversion is fantastic and I don't know how I got along without it? Because of the wider window bandspread in the RTTY position, the "new" RTTY filter not only passes all 170 Hz. signals, but actually acts like a whole different filter in sound when compared to the normal cw filter. In fact, I find that I am using the RTTY position now for extremely difficult QRM cw signals. One does not have to be a teletype-nut to take advantage of this conversion.

Mike Stone WB0QCD

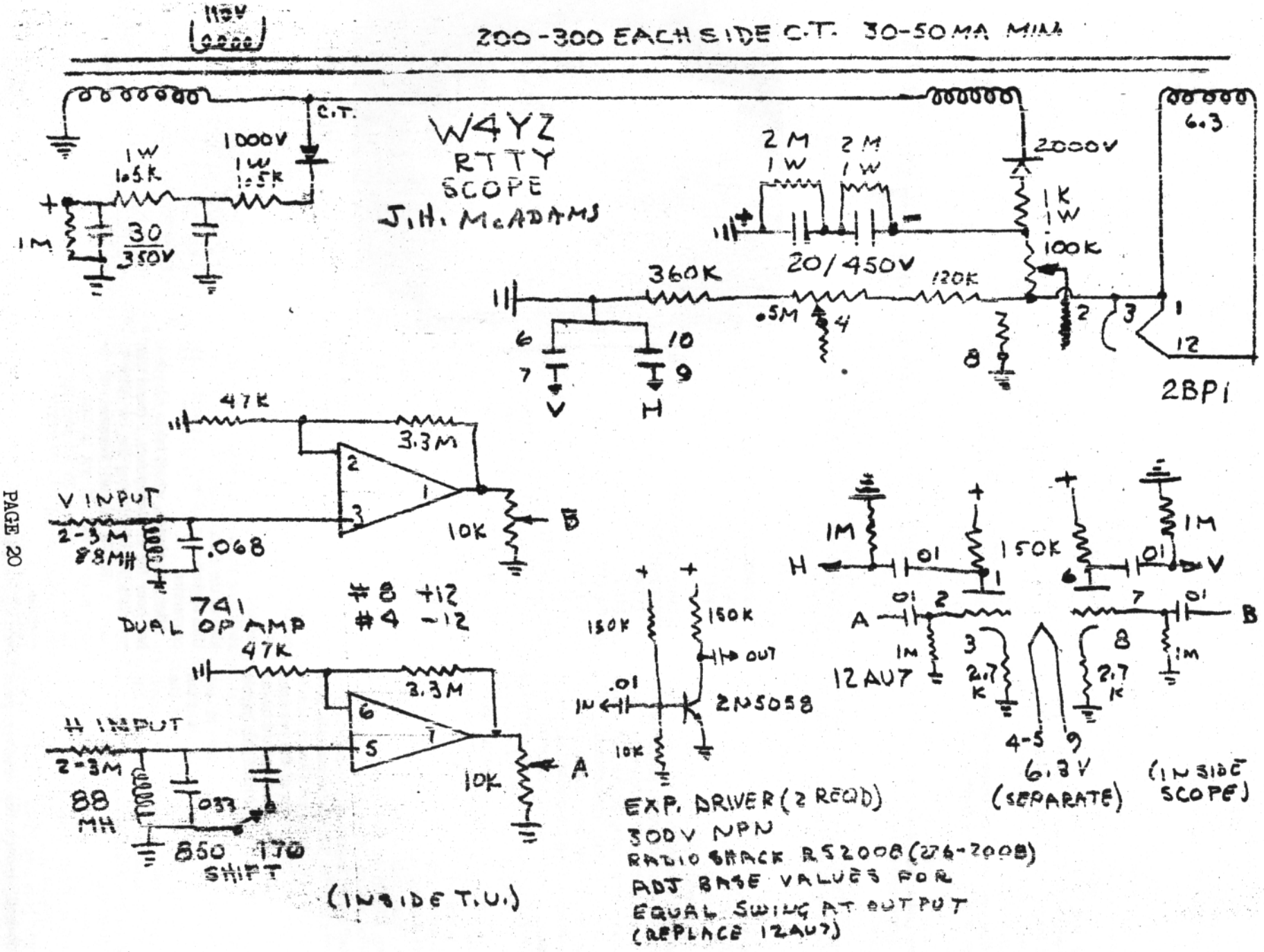
schematic page 20



John P. Goheen III Editor

Murphy's Law
In any calculation, any error which can creep in will do so.

Any error in any calculation will be in the direction of most harm.



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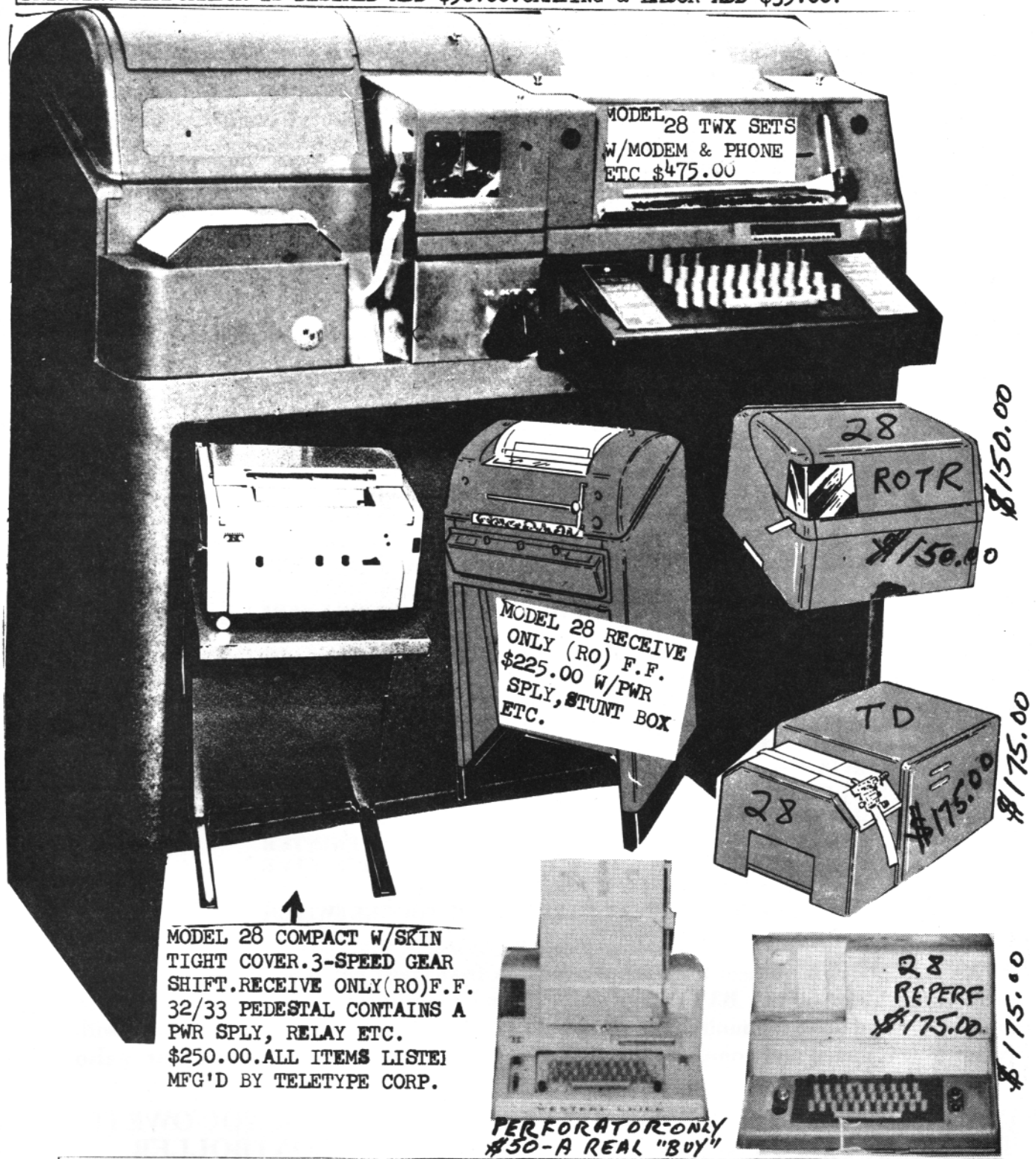
(INSIDE
SCOPE)

MODEL 28 ASR (AUTOMATIC-SEND-RECEIVE) COMPLETE W/TD (TRANSMITTER DISTRIBUTOR), PWR SPLY, STUNT BOX, PERFORATOR ETC. SPECIFY SPROCKET OR FRICTION FEED $375.00. IF A PRINTING PERFORATOR IS DESIRED ADD $50.00. CRATING & LABOR ADD $35.00.



MODEL 28 COMPACT W/SKIN TIGHT COVER. 3-SPEED GEAR SHIFT. RECEIVE ONLY (RO) F.F. 32/33 PEDESTAL CONTAINS A PWR SPLY, RELAY ETC. $250.00. ALL ITEMS LISTED MFG'D BY TELETYPE CORP.

PERFORATOR ONLY $50 - A REAL "BUY"

C.B. GOODMAN 5454 SOUTH SHORE DR. CHICAGO, IL. U.S.A. PHONE 312-753-8342 ANYTIME.

Qty & dealer disct's. Prices are picked up Chicago. Add $25 labor & crating or packing of RO, ROTR, REPERF., TWX $50. Payment in advance-cashiers, cerified or M.O. Have many items not listed, state your needs & wants-modems, data sets, paper winers, FRIDEN eqpt, manuals, schematics etc. Also 32's, 33's. 35's etc. Telex's etc. Antique telegraph and tele phone eqpt. State your wants. CHARLIE

INTRODUCING. . .

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.

Our system directly interfaces to your existing Baudot or ASCII equipment - there is nothing else to buy. The BTA-1 exceeds the capability of the "FIFO-UART" system you're probably using now, while providing complete BAUDOT to ASCII and ASCII to BAUDOT conversion capability. The BTA-1 is easily installed. You don't have to be a microprocessor expert, as our device connects between your terminal unit and loop peripherals for complete RTTY control.

CHECK OUT THE BTA-1 STANDARD FEATURES

- **UTILIZES STATE-OF-THE-ART 8085 MICROPROCESSOR DEVICES**
- **PROVIDES FULL BAUDOT-ASCII CONVERSION - USE AN ASCII KEYBOARD AND DISPLAY, OR CONVERT YOUR PRESENT FIVE LEVEL EQUIPMENT TO ASCII INSTANTLY WHEN THE F.C.C. ACTS**
- **CRYSTAL CONTROLLED SPEED GENERATOR ALLOWS "ON-LINE" 60 wpm TO 100 wpm CONVERSION**
- **UART QUALITY CHARACTER GENERATION IS PROVIDED BY THE BTA-1's TWO SERIAL-PARALLEL DEVICES. BOTH RECEIVE AND TRANSMIT SIGNALS ARE PROCESSED**
- **UNIQUE 1024 CHARACTER BUFFER (FIFO) ALLOWS MESSAGES TO BE PRELOADED-ALARM SOUNDS WHEN OVERFILL THRESHOLD IS REACHED**
- **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 CONTROLLED BY TOGGLE SWITCH ACTION**

The BTA-1 accepts FSK voltage level input available from most amateur terminal units and interfaces either 20 or 60 mA RTTY loops. All external connections are optically isolated for maximum safety and noise immunity. The BTA-1 RTTY control unit is available in kit form with quality 5″×8″ PC board and complete instructions. A fully assembled and tested unit is also available. Power requirements are +5, +12 and −12 Volts.

CONTEST OP, PIX COLLECTOR, OR RTTY RAG-CHEWER, YOU OWE IT TO YOURSELF TO EXPERIENCE THE BTA-1 RTTY CONTROLLER.

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, N.H. 03047

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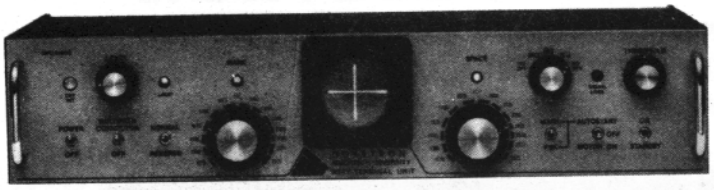
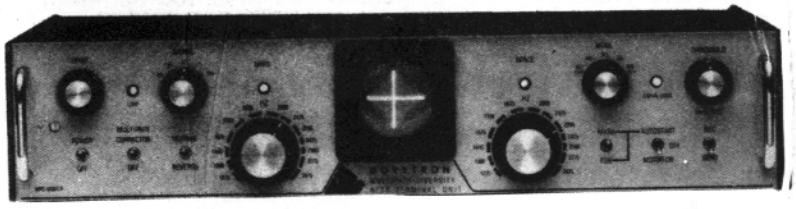


MPC-1000C

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.

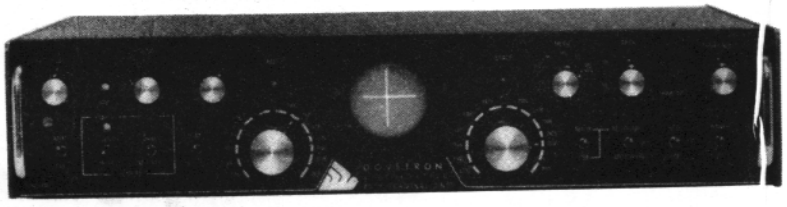


MPC-1000CR

Signal Regeneration &
Speed Conversion

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



MPC-1000R/-TSR-500

Dual UART Regeneration,
Speed Conversion, 200
Char. Memory, Word Correction & DIGITAL
Autostart

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 mode.

*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.

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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.

DOVETRON

627 Fremont Avenue
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RTTY Journal

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