Journal

JULY/AUGUST 1982

VOLUME 30 NO. 6

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SOME OF THE RTTY GANG AT THE IMPERIAL HOUSE NORTH IN DAYTON

CONTENTS

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RTTY JOURNAL

DEE CRUMPTON, N6ELP formerly KA6NYW OWNER-EDITOR POST OFFICE BOX RY CARDIFF-BY-THE-SEA, CA 92007

JOHN P. GOHEEN, KA6NYK ASSOCIATE EDITOR

BUSINESS OFFICE 1155 ARDEN DRIVE ENCINITAS, CA 92024 TELE: 714-753-5647

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MANAGERS

JEAN HURTAUD, F8XT CHILLAC 16480 BROSSAC, FRANCE

DR. ARTHUR GEE, G2UK 21 ROMANY ROAD,OULTON BROAD LOWESTOFT,SUFFOLK NR32 3PJ, ENGLAND

KANJI YAMAMURA, JH2FHX 2-42 UMENOKI, IZUMI-MACHI TOKI-CITY, GIFU-PREF JAPAN MAIL NO. 509-51

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Well everyone seems to still be on vacation around here. It is tough trying to get back to normal routine again.

John, WA9WJG our VHF editor seems to be on vacation as he cannot be found by radio or landline. His column was omitted this month for that reason.

The article on "Interpreting RTTY Weather Data" will appear in next months issue of the JOURNAL due to the necessity of rewritting it. Seems that the National Weather Bureau does not know what it is doing at times. They gave me the information in December that the codes had not changed in twenty-five years and I believed them. Well, I now know better. The codes were changed January 1, 1982 so the article is in the process of redoing it.

We did manage to get to Dayton this year and had a good time. The weather was good and it was, as usual, fun seeing all of our friends again. From Dayton we went to Houston to visit with one of our sons (a non-Amateur). We did have a nice visit with Gray Hoffman. Tried an RTTY QSL in Houston but my Mag-mount has just not capable of getting into the repeater there. We brought our whole RTTY station with us to Dayton, Dallas and Houston, but could not raise anyone on RTTY. Our station was also at the Ham-comp in San Diego a few weeks ago. It consists of: HAL Telereader CWR-685A, an Icom IC-245 and a Midland 13-509. The Kenwood TS-130S goes along with us when necessary. We can pack the whole station into three flight bags and carry it with us instead of trusting it to the baggage hole.

While in Houston we did manage to visit the Space Center. Don't miss it if you are anywhere near Houston. The Amateur radio station at the Space Center could not be reached that day due to some malfunction of their equipment so we just toured the whole thing without contacting any Amateurs.

While writing this column we have been in contact with the Palomar Radio Club. They are at the Del Mar Fairgrounds manning an Amateur Radio booth. My 28 KSR is there and they are having trouble getting it on the air. Their location is not the best although it is adjacent to the wide Pacific Ocean and about 5 miles from our QTH. Tests have been made and the concensus of opinion is that my 28 is not the perfect instrument ${\tt I}$ had thought it to be and the location of their antenna is not the best in the west. So this column has been written over a period of 5-6 hours and the thought process has been interupted many, many times. I don't mind it however, for John, KA6NYK and I will be doing our stint at the Fair on July 4th and July 5th, and if the bugs can be worked out now instead of then, I will be most happy.

Well, the Palomar Club has finally given up on two meters and have a 20 meter rig there now for RTTY. So if you heard someone on this date June 20th Fathers Day originating from Del Mar Fairgrounds it will be the Palomar Club with W6NWG, Paul, WD6FWE Don, W6PKI ED or possibly WA6LZA Jose at the keys. July 4th and 5th you just might find yours truly on the keys. At any rate hope all of you fathers had a good one and C U L de DEE N6ELP.

Remember that the new RTTY Beginners Handbook is now available. It has been completely redone and now computers are included in the text. \$8.00 PPD to the RTTY JOURNAL.

Clubs/commercial establishments will be given a very good discount on orders of 10 or more Handbooks. Write to John, KA6NYK at the JOURNAL for the discount rates.

From birth to age 18 a girl needs good parents. From 18 to 35 she needs good looks. From 35 to 55 she needs a good personality. From 55 on she needs good cash.CARTG.



ev ecll

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THE AGONY OF THE QSL WAIT

THE THRILL OF A NEW ONE

The last two months have characterized by solar flares and geomagnetic storms. As we continue the slide toward the bottom of the 11 year solar cycle, it has been slim pickings for most northern latitude Amateurs. Although there have been some really good days, with Japan and Europe coming in full blast, generally conditions have been very poor due to high absorbtion by geomagnetic storms. I have been unable to keep my 15 meter schedule with F8XI for those reasons.

Most of the time the north-south paths have been fairly good. VK and ZL stations have been coming through to the USA with good regularity. KC4-AAA, actually located at the South Pole, provided us with a very interesting QSO. Arliss, whose home call is W7XU, works both CW and RTTY. If you wish to contact him on RTTY look for him after 0500Z on weekdays, because during the work week, the TTY gear is tied up with official traffic on commercial frequencies. On Sunday (his time) he is free to use the equipment at any hour.

Arliss is a member of the United States Scientific Expedition located at the pole. The 18 member group is "stuck" there until November when the next plane is due to arrive. The last plane left the base in mid-February. Darkness and extreme cold keep planes from landing there during the winter.

About bands, Arliss had this to say: "20 meters has not been all that great. Polar absorbtion events that don't do much to you guys, can wipe us out." He says he is working on a 15 meter antenna and has made occasional OSOs on 80 and 40 CW.

Arliss has not been able to do very

much 40 meter work because those frequencies interfere with some of the scientific experiments being conducted on the polar cap.

However, when he can, he enjoys making random appearances on the 40 meter novice band. When he tells a novice he's at the South Pole, he's not really sure they believe him. One novice told him that he had trouble getting his signal to radiate out of the state of California, so he could not believe he was talking to the South Pole!

Aurora Australis (Aurora Borealis in the northern hemisphere) affects radio communication with Arliss, but not as much as it does with the U.S. McMurdo and Siple Antartic stations located about 800 miles further north. Absorbtion at those latitudes restricts the use of many frequencies according to Arliss. He also says the ionospheric disturbances are more intense and of longer duration. than at the lower latitudes.

When the wind speed exceeds 20 knots, snow and ice static become a problem. The base is located at 9000 feet above sea level, and the temperature gets down to 100 below F. which is a little colder than it gets in North Dakota! If you work Arliss ask him about joining the "300" club. If I have my facts and figures straight it goes something like this: When the outside temperature is minus 100, you go into the sauna bath, crank the temperature up to 200, sit there for awhile and run naked to the pole and back, a distance of a quarter of a mile. Arliss said firmly, "I will never do that again! My only damage was a pair of frostbitten thumbs!"

Qsl to Arliss direct. Adress is Box 400, FPO San Francisco,CA 96692. There is a scheduled mail and supply air drop to the base in June, but no cards will be answered until after November. I hope they find the ones dropped in the snow.

ZL4GF/C has been active from Chatham Island in the Pacific Ocean. Stephano cut a swath through 20 meters one Saturday at 0700 as he worked in succession: KG7V, JA1DSI, DJ2TI, DF2KU ON4BX, ON4CK and W3KV. Arthur, ON4BX, right after working the ZL, awakened W3KV at four in the morning. He called John by transatlantic telephone to alert him to the Chatham station. That's a real DX friend.

F8XT was the first RTTY station to work Chatham Island. Jean reports that the time to look for the ZL is around 0600 on 20 meters. At present Stephano' is using a whip and 50 watts, but he is upgrading his antenna system and plans to build a seperate shack for the four months he will be there. QSL via ZL4KI.

The annual DXpedition to Liechtenstein was a RTTY happening between May 20th and 30th. They were using two call signs, DJØWQ/HBØ & DA1WA/HBØ. The Weisbaden Germany Club, which consists mainly of American military and civilian Hams, has been doing this dxpo for eight years. Rig this year was a TS-120S with a DS2000 keyboard and homebrew TU gear. Antennas were monobanders on all except 40 and 80. QSL for DA1WA via KN6G or info in 1982 callbook. DJØWQ to Jim Clarkston, POB 1253, 6056 Heusenstamm, West Germany. Jim, on his QSL to me, indicated there was a possibility he would return to HBØ land in July. He

was hoping for better conditions for next time, for the bands were dead last time.

The Wiesbaden Club meets the second Tuesday of the month at the Stadion Restaurant, next to Sportzplatz, Wiesbaden. All Hams are welcome.

W5HEX pointed out the second big happening of the period. Jack says that one of the auto-start MSO stations had a hang-up and the carrier was on steady for three days. Guess where the operator was? Answer: attending the Dayton Hamfest. According to Jack and W8JIN, VP5GT will be QRT on a sailing trip until October. Jack has been quite active, logging:HC8KA, ZL4GF/C, 9M2SS at 1145Z on 20, XT2AW, and 5B4CV (Cyprus). QSL to the latter at Box 219, Limmassol, Cyprus.

Note from XE10X indicates that XF4-MDX made 630 QS0's during the DXpedition.

HC8KA put the Galapagos Island on RTTY recently. Ted had a fixed beam, on the long path to Europe, which made it very hard for the Asian stations to work him. Gin, JA1ACB, reports only a few Japanese stations worked Ted. Gin also indicates that Kan, JA1BK, is trying to get on RTTY from Thailand (JY).

K7ZJD/KH2, Bob, is on with 500 watts, a vertical and an Atari Computer (16K). He did his own programming. QSL to POB 4426, AAFB BR YIGO, Guam 96912.

RTTYBITS....K6LPL, Dave LITTLE Gardner of DX fame is now on RTTY. Heard him working UR2FU, Hellar in Estonia..DL4LH. his XYL and two harmonics are all Amateurs (who gets the rig?)..9Q5HU on RTTY is a pirate (my card came back stamped "Station Pirate")..DF900/JW worked only one US station--feedback troubles..FO8GX will be in Tahiti until June 1983.... FWØBK QSL cards have been mailed... DF7XA/OY is on, but no other information..YJ8TT should have his linear back by August, now he is running 20 watts.

SM6ASD, BO hopes to improve his antennas for 40 meters so he can try for transatlantic contacts on that band. He says 40 is alive with Europeans, but he would like to see more

US and VE stations on that band. Most of his activity takes place on a small farm 40 miles from Goëteborg, where the noise level is low.

WB5HBR writes he is the QSL manager for DU1EFZ, Edwin. Use only the 1982 callbook address for Vance. He reports working a nice string of DX: CO2FRC, QSL via Box 1, Havana, 5N3ECA Emil, in Warri, Nigeria, QSL via I6DZB. VP9IM, Steve, QSL to POB 275, Hamilton 5, Bermuda. HC8KA, QSL via home call HC5KA. Vance also has worked ZL4GF/C 3 times on RTTY and once on CW. All times Stephano was calling CQ and getting no takers at all. Where was I? In bed probably. Vance also discovered 5B4CV for another new one.

W8CAT, Dick, worked 9K2KA and was amazed how quickly Adnan's QSL came through. (Mine was fast, also.) Dick also reports receiving a QSL that confirmed a 1976 contact (I knew the mail was slow but....) He says you should never give up. F8XT feels the same way. Recently Jean received a QSL which confirmed a contact from 1939! It was from W9PZI in Milbank, South Dakota. (Yes kids, South and North Dakota were in the ninth district then. My call originally was W9LHS). Jean says the card came through the Bureau but it really originated with W1SHZ who used to have the South Dakota call.

5H3LM tells us that he has A.C.line supply problems. Apparently the municipal power is turned off and on at random intervals. Lennart apologized for the delay in meeting a sked because of power failures. Then, during the QSO, his line voltage dropped to where the RTIY copy went into complete garble. QSL to POB 511, Mbeya, Tanzania. (It was Tanganykia when I was on the air from VQ3 land. I remember Aftican power failures..once was caught in a Nairobi hotel for over an hour when the power went off)

9V1VG, Rob, can be QSL'd by POB 779, 59 Payoth, North Singapore 1231.

N6DPH/DU2 is new to RTTY from Luzon. He will be there until November, 1983. You can QSL via WB3IET or Harry Large, PSC Box 1832, APO San Francisco 96286. The post office has a new zip code directory for the USA. In the front is a numerical list of zip codes for the military overseas. If you don't put a zipper on an APO address it comes back slowly, but it does come back.

The County Hunters are at work on RTIY. Joe, IØAOF, and Taka, JA1JDD, are in the 500 county group. Joe also reports working UAØPP on 20 meters at 1500Z. I worked the Russian about a year ago. I raised him on RTIY, but his machine broke down, so we had to finish by CW.

I like a little CW now and then, just to keep my hand in. The operators that I can't stand are what I call a 20-40-80 lid. The title means this: he sets his dashes for 20 WPM, His dots for 40 and he spaces for 80!

THOUGHT FOR THE MONTH: The nicest thing about building your own Ham gear from scratch is that it comes with a lifetime service warranty.

A RITTY DITTY

ODE TO THE BOTTOMING ELEVEN YEAR CYCLE

THE "DOG DAYS" FOR DX, THEY SAY, START IN JUNE AND END IN MAY!!

ON7EU, Jan, sends along a nice list of worked and heard, 5N3ALE, ISOESS, KØDS/HR5,4X6CV and 3A2EE, QSL to 3A2EE: Jean Bardos, 12 Rue Bosio, Monaco. KØSD/HR5 is via WBØMZB. Recently Jan has added a Tono 7000E and says it is a lot nicer to use during the night time hours when every one is asleep. He still has two Lorenz LO-15, but they are too noisy! Jan also included a list of those that got away from him..5Z4RT, C31CJ, 5B4CV, and C02FRC.

I recently took on the QSL manager's job for KAØNEX. Jeff, is one of two operators aboard the "Hjemkomst," a 78 foot replica of an ancient Viking ship which is traveling from Duluth, Minnesota to Norway under sail. Jeff is new to Ham radio, but he is learning rapidly! I tried to get them to take a RTTY video along, but the skipper vetoed the idea. They work sideband and a very little bit of CW. But I now have an appreciation for the QSL manager's

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job. I have been getting cards with no date, others with local time instead of UCT. I think the QSL managers of the world should outline a system and distribute it to Hams everywhere. It would make the job easier and more fun.

W3EKT, ED, sent along a big heap of statistics from his recent BARTG contest operation. It is quite interesting. Ed made a grand total of 373 contacts in the 30 hours. His best QSOs per hour were on 15 meters--he averaged over 18 per hour for two hours. Most multipliers per hour happened on 20 meters. Ed's total QSO's by band:80-1, 40-28, 20-131, 15-149, 10-64. By multiplier:80-1, 40-15, 20-51, 15-44, 10-27. The amount on 40 amazes me. I never thought to look there during the contest. The overall average of ED's contest effort was 12.43 contacts per hour, and he changed bands 18 times!

K4JAF, Jim, is back on RTTY after a couple of years hiatus. On 20, Jim recently worked HZ1TC (2100 UTC), 3A2EE (2245), VP2VAT (0210), HP1XLL (2300) and 9K2KA (2400). On 15 he found UR2FU (1600), and on 10 TR8WR (1600) plus 0E5BS/5N7 (1800).

The correct date for the 12th SARTG W/W RTTY Contest 1982 is Saturday and Sunday, August 21 and 22, not the 14th and 15th as previously circulated.

My mail indicates a lot of readers agree with me that RTTY Bible Study Nets have no place on the Ham bands. One Saturday I watched two stations sending Bible text back and forth for an hour. When I looked up each QTH in an atlas, I discovered they were located about 15 miles apart. A discrete frequency on two meters (simplex) would have served just as well as cluttering up 20 meters on a busy Saturday afternoon.

I am still looking for stories about Boyd Phelps, WØBP. Since my last mention of him, WØHAH and W2LFL have been very generous and sent excellent material. Any old timers who remember "Beep" and/or the early days of high-frequency RTTY please send those remembrances to me. As a former owner of a model twelve (12) I would like to hear from former owners of those

monsters. Any good stories?

I have been toying with the idea of starting a "Lousy QSLer" department. Part of the fun of Ham radio is exchanging QSL cards. I really can't figure out why some Hams do not return the courtesy by sending a card. How's this: I have been unable to get a card from Venezuela. I must have sent cards with SAE and IRCs or green stamps to at least 20 YU stations. To date none have replied (over a two year period). The same holds true for CW, but I did manage to get a CQ confirmation from an American station who was working portable YV. Send me your nominations for LOUSY QSLers.

W3KV, John, had the good fortune to be the first station to work XT2AW in Upper Volta. The op is Harald Becker and his QTH is Ougadougou. John says you are supposed to say that town's name with a mouth full of crackers. QSL is via KN1DPS. Harald is using a TR-7A, beam, TRS-80 with a home brew TU. John also forwards info that IQ5ARI is a DXpedition to Capraia Island. It counts as Italy however.

PICTURESQUE PRINT: "FB on lightning hitting your finals!" (I wonder what he tells people with cancer?).."The WOODPECKER got you!".."The spots and woody really make RTTY a pity!"....
"L(.)(.)KING FOR YOU AGAIN" (K5WTA/6)

OK1JKM, Milos advises that the Arabian Net meets 14250 Friday at 0500Z. HZ1TC checks in, but will switch to RTTY. TR8WR, Bob, from Gabon works 28080 Mhz at 0500 aimed at JA land.

GREAT NAMES FOR A QTH: North Poverty Pocket, Illinois. Painted Post, PA. (Speaking of poverty..I heard Reaganomics are beginning to work--Rolls Royce sales are up 15 %.)

AWARDS

WORKED ALL STATES

WB2VTD 18, March, 1982 JA1JDD 20, March, 1982 I8AA June, 1982

WORKED ALL CONTINENTS

KD40M(14MHZ)#95 14,May,1982 HB9BQL(14MHZ)#96 June,1982 DH2BAB(Mixed) June,1982 DXCC-RTTY

#67-WOHAH #68-K4VDM 6,May,1982 17,May,1982

DXCC ENDORSEMENTS

I8AA

180-Sticker

F5JA sends a juicy list of worked/heard stations. Jean lists OD5MN, QSL via I8YCP, 9V1TK to callbook address, likewise EA9KQ.

K6WZ, Carl, comments on making WAC in just 3 hours during the recent BARTG contest. His first RTTY WAC was in 1968, long before Japan was allowed to xmit RTTY. He worked a US Army station in Okinawa for the Asian contact. Carl says he really likes the BARTG scoring system. We do too!

W8JIN, Jim, lists the following on 20: KA6RPE/KH2 1100Z, C02FRC 2230, FY7BC 2230, 9V1VG 1140, 9M2SS 1100, HH2CR 1830, ZF1GC 2300. On 15 Jim worked UR2FU 1900.

3A2EE will be active on 14 Mhz from 0500Z on. according to Chuck, W6J0X. Chuck worked ZL4GF/C on 20 at 0800Z.

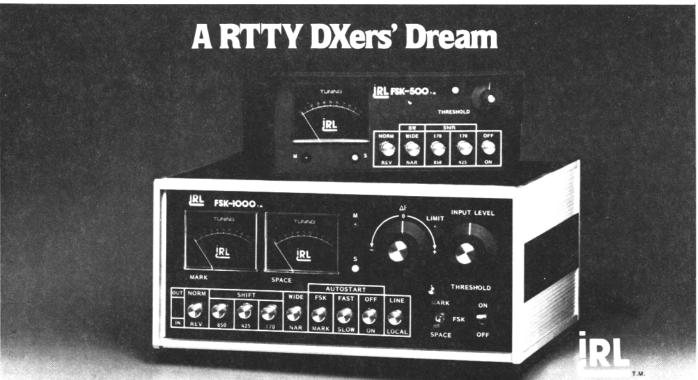
W3KV, John, who once held this job, has cracked the magic 200 number confirmed. John tells of hearing/working the following stations: CP4DK, CP5EQ, CR9AK (QSL via JA1MIN), EA6GV, EA8AHK EA8RU, GW4LWD/A, HH2CR, KP4PG, OX3FG, SVØMO, TF3CC, UB5LPK (CW-RTTY),Y08FR, 4N7NS(same as YU), 9M2CR and 5N3ECA (QSL via I6DZB).

K7BV, Mac, has crossed the 200 barrier also. 200 is a long way from 100 if my mathematics holds true. Congratulations to the 200 and up group!!

VE3LY, Blair, commented about using the high end of the RTTY portion for DX. Canadian stations are not permitted to work RTTY above 14100, so DX stations should stay below that mark. Blair also lists a nice pile of DX, including: ZF1GC via VE4XN, 5N9NGA/3 POB 1488, Kaduna, Nigeria.

WA3ZKZ, Crawford, from Delaware tagged ZC4AU, Pat, on 20 meters at 2300Z. He also heard/worked AM07CLH, AMØ5CVR and AMØRU/z. These stations are EA (Spain) in disguise.

ON4UN, John, has been absent from the DX bands for the last month. He has been traveling in the USA.



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Heard IØZSG fill his WAS by working W5HJV/7 in Laramie, Wyoming. We know Wyoming is one of the rare states, so look for this one. His callbook address is okay.

T32AB, Lamarr is on now and then from Christmas Island. He has a new split screen operation and is happily pounding away on the keys. Worked him at 0530Z on 14090. QSL is via N7YL.

VP9GE, ED, informs us he will be back on about the time this issue hits the mail. A number of newcomers to RTTY must need Bermuda, and ED's presence will be welcomed again.

Thanks to everyone mentioned above plus W3FJY, WØHAH, JA8ADQ, W4CQI, W8CAT, JA1JDD, JA1DSI, K4VDM, W2LFL, KD4OM, I8AA. This is your column, and I really enjoy hearing from you by RTTY or mail. 73 de Bill, WØLHS.....

HONOR ROLL

SM7CLZ

K4VDM

113/102

K1NVY/7 112/95*

113/100*

213/208*

212/204*

UA1ACB 205/202*

ON4BX

ON4CK

IØA0F

W3EKT

VK2SG

W6J0X

F5JA

I5FLN

W2IUC

K6WZ

DK5WG

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80/66*

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62/51

60/18

55/42

K9MD	50/47	KD40M	40/17	
N4CC	50/5	WB4YSJ	33/23	
WA4JJY	45/25	HC1JX	24/16	
ON6HF	43/28			
W2PSU	143/133*	out of o	rder	

*means updated to June or last one.

RESULTS OF CW/RTTY WORLD CHAMPIONSHIP co-sponsored by 73 Magazine and the RTTY JOURNAL.

Single operator, single transmitter, computerized RTTY only: Morton Toussant N7AKQ Score 3131.

Single operator, single transmitter, computerized Jerry Hale, KOJH RTTY score 2088, CW score 1716.

Single operator, single transmitter, computerized Vance Fauver Jr., WB5HBR RTTY only score 4600.

Multi-operator, single transmitter, noncomputerized Radio Club "JUNIOR", OK3KII Score 915 RTTY only.

Single operator, single transmitter, Noncomputerized SL5AR P10/F043 score 915. RTTY only.

Single operator, single transmitter, computerized G. Loreti, IOAOF Score 160. RTTY only.

Single operator, single transmitter,. noncomputerized Bruce Balla, VE2QO, RTTY only score 90.

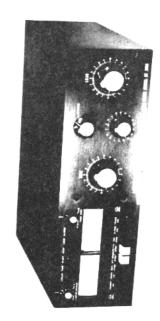
Some of the stations worked during the contest are:KJ2N, AC3J, VE7CIM, KB7WV, F5TA, PAOCWI, F6CNC, KB5RZ, WA3CUD, WOLYO, I5PLR, DK9HU, 140JT, W6SFE, WA8LXY, WA4JMQ, W8YMI, 9K2KA, DJ5YQ, DL7QJ, PA3BXC, G3YJG, KORJ, WA7RZW, K1ANA, W9AVX, K8RA, W9CRC. WD8DIE, N6FVV, WOKCL, N3AKQ, WD0BGS, KC5CQJ, KB2VD, YJ8TT, ON7EU, YU3TRB, WA1GNA, KV4J, AI4J, VK2BLN, G3PPD, EA1RCR, I4WYE, V37CIM, W4VQE, KG4AH. EA6CE, I7VIZ, DK5WJ, F7HD, IT9MTH, G3JDO, WOHFX, KA4OLH, WA1VVF, KA1ESG. W7CWK, WDODLM/6, K9FZD, WA4IAI, WA0-BMH, WBONRP, KCOT, W4TXJ, WOMT, OK3-KII, N9AGO, I2BSR, KD4YC, K9TBD/3, K9RIJ, I8NLZ, DJOKI, N1BLK, I5TYJ, WD9ADB, W3VLE, K4JT, EA6BH, I8ZUR. HB9BAY, DK5JZ, SM5FUG, PA3CAU, W7IE, WB7VHC, WB3KXM, KB3VN, W3YEA, WB7FCB. W1CDM/6, AK2H, WOLHS, WOHAH, VE5RG, WA7YDP, ZL2BKY, GI4AHP, DL1KX, K8UC, WOLYM, W9JFF, SL5AR, ON5NM, SM2JRK, N5DFH, KF6A, WB4CIC, KCODM, WONXH. VETAGJ. G4EMR. DL5DAJ. DJ0IE. I8IMD. KD4RR. WB4TRJ. W7DIB. KA9CSD. WA3RRC.

VE6FA, W5VDC, JA3EUZ, KOJH/4, N7AKQ, VE3VX, KOMGQ, KN6I, K3SAE, DJ9MH, VE-2Q0, WB1ARX, WB5HBR, F6BAG, I2BMP. EA2AAA. KA8CXO/4. K4FEY. KA5COJ. N2JU VK3BLN, G3IPD, ON4ACN, DL4NAT, LZ1KPG F6EBY, WA4TBG, WB2YOF, KB3LR, W2WQD, N5DHF, K6DRJ, KD6NU, KL7HDY, WB5NYA. K7BV, WB3INT, K6HGF, IT9DSL, WA7NHU, WOTUP, KB3DF, N5DD, VK2DAB, G4NFY, DF7HD, I3MJB, F3EG, KH6JNT, K07N, WB-3GXN, DF3PU, N6ELP, DA1EN, DLOWQ/P, IOMYH, OE5ML, CT1JQ, WBOEIG, WD8EEO, WA9JFL, KA1MYF, WA8CZS, N3AJW, KOMST, KM50, WB9QPG, VE7DLX, IOAOF, TI2DO, ZS1CX, DK7QJ, WA2PMW, KD4SO, K4QX, W5DOZ, G4KHX, DL9HAY, G4DEJ, EA2RU, KP4EFP, WA4QNO, KD4RT, HZ1TC, DF8UR, I4YWG, PA3CAY, I6DBY, N3ATH, WA8NUX, KC9DC, N8AKF, KR8S, KA2AJH, KD9D, KB-7SE, and K4WZ.

There were a lot of different calls worked during the contest and a lot of "goodies" on during the contest. There seemed to not be much of a call for the CW part of the contest. K7BV has some ideas "1-dump the rule about working a station one time. A big part of contesting is being able to work the same station on as many bands as you can. Every contest I have been encourages this. 2. try to avoid scheduling the contest on weekends of religious holidays. I almost lost my happy home by contesting on Palm Sunday." Jerry KOJH/4 says, "the timing was wrong. There have been 3 contests on consecutive weekends. BARTG, Giant Flash and RTTY World Championship. People get tired of hearing CQ CONTEST and are less cooperative when one asks for a contest report. I also believe that there should be some penalty for running high power, it gives an unfair advantage, causes unnecessary QRM and is not necessary as most stations are running under 100 watts and doing quite well."

Many thanks to Jake, K5WTA/6 of the San Diego Teleprinter Society for seeing to it that this contest was scored properly. Next year this contest will be bigger and better. Thanks to all participants. your awards are on the way.

New Automatic Antenna Tuner Auto-Track AT 2500



Designed and Built by J. W. Miller Div

Check these state-of-the-art specifications

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 - Direct Reading SWR Meter: 1:1 to infinity.
- Direct Reading Power Meter: Two meter scales from 0 W to 2500 wand 0 W to 2500 W. Iront panel switch selects FWD or Reflected Power (illuminated panel meters). Power meter displays RMS with con-

tinuous carrier and automatically displays PEAK when driven with SSB signal.

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HAMCOMP 82

The ARRL Southwestern Division Convention was held in San Diego on June 4th, 5th and 6th. This was a super convention jointly sponsored by the San Diego Amateur Radio Council and the San Diego Computer Society. This convention consisted of the normal Amateur radio convention along with a computer fair. The crowds really turned out and it left little doubt that Amateur radio and the computer have combined. The Amateur using a computer for RTTY, CW etc., have forged a unique and harmonious relationship. The computer has barely scratched the surface of its impact on Amateur radio. The communications capabilities of the computer I believe will usher in a new, exciting and challenging era for Amateur radio. This convention was more important from many standpoints. This was not two separate groups but one group with common interests. With breathtaking speed and quietless effort the computer has become an integral part of Amateur radio and is only the tip of the iceberg. The coming years in Amateur Radio will be exciting and challenging. I realize that some will tell you that the sun spot cycle is on the wane. I have heard others say, "computers Bah Humbug.". The transition from AM to SSB was bitterly opposed by many. I can remember going to conventions and hearing quack quack noises by those opposed to SSB. This was just an imitation of what SSB sounded like on the old AM receivers. SSB burst on the scene and so has the computer. The years to come will be filled with untold wonders. The ripple will become an explosion as the software makers tire of games etc., and turn full attention to Amateur Radio. The old ways die hard for many Amateurs. I plan on keeping my 28ASR with all of its noise and oiley smell but will

HITS & MISSES by GEORGE

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

be looking forward to the new and exciting challenges of the computer.

DX DATA BASE

In my column last month I discussed the Synergistic software "modifiable database". The address is as follows: 830 N. Riverside Drive, Suite 201, Renton, WA 98055. Synergistic software also makes Database written in Spanish and Swedish. The mail regarding this article was fantastic. I don't think the mailman was thrilled but keep writing and many thanks.

ARTICLES

The JOURNAL needs articles. Please send your construction articles, computer programs etc. All pictures should be in black and white. RTTY DXpeditions and general interest and even public service where RTTY is involved are most welcome.

I will close my column for this month and prepare for yet another convention here in San Diego. I have received many pictures of RTTY stations we try to print them all. Again please black and white only. I will be off for my annual leave in the month of July.

So long for now....George, WA6CQW.

ARMED FORCES DAY 1982 AFTERMATH

The day started about 5 AM on the morning of May 14,1982, when all stations loaded their Amateur equipment and met on the Ohio turnpike for breakfast. The three car caravan then proceeded to Ft. Meade, Maryland, arriving there about $7\frac{1}{2}$ hours later. All antennas were up including the two log periodics, one stands about 100 feet, the other stands on top of a tower about 300 feet up. Equipment was set up for the four stations to operate crossband on 80-40-20-15

meters. Dave. WB8APD. Dwaine. WA8MEM and I started to set up the Teletype operations. Dave brought his Yaesu FT901 and VFO model 43 printer. I brought my HAL ST-6000 TU amd HAL DS-3100 ASR with MSO option and hooked the model 43 to the HAL DS-3100 for hard copy, so when we copy Baudot it will convert to ASCII at the same time. That feature worked out very well. The model 43 even copied the CW transmissions after we changed to CW operations later in the day. HAL equipment was then hooked to the Yaesu FT901 and to Collins 30S1 linear and the 100 foot log periodic which had a flat match. We tried everything out on Friday and discovered that the linear had a bad plate transformer so John K8YSE, Alex, K8-EUR proceeded to take a transformer from another 30S1 linear that was broke down for another problem. When they hooked the 220 volts to the lieverything was flying for Saturdays operations.

By 9:30 PM everything was ready so we went to dinner and then hit the sack for a good nights sleep for the busy day ahead.

At 8:30 AM all operators had arrived and I started warming up the HAL DS-3100 for the days operations. After programming the war schedule and sending 5 minutes of RYs and Quick Brown Fox we were ready. The contacts didn't come right away. We were transmitting on 14403.5 KHz and listening on or around 14098 KHz. It took about half an hour before we made our first signal contact. Most stations said we had a very loud signal. We proceeded to work all four corners of North America. We managed to work 50 stations on RTTY. The only excuse for not working more stations I could think of is that many stations do not have crossband operational ability.

FIELD DAY CONTINUED

I know that in years past we always had trouble with the RTTY operations but we there this year but the stations were not. At 2:00 PM I changed over to CW operation and proceeded to work CW on 20 meters until closing down at 9:00 PM.

Early afternoon found the linear broken down and another 30S1 hooked up. That one lost the power supply filters so we hooked up my Dentron MLA-2500 which ran cool for the rest of the evening.

The Secretary of Defense message was sent out of Ft. Deitrich Army Base but we are trying to get that changed so we can send it next year with the HAL DS-3100ASR from Ft. Meade so stations copying the message will hear it better.

So let's try to get more RTTY stations on the air next year for Armed Forces Day operatons. I would like to work all RTTY stations in the USA on crossband.

The team of operators did such a nice job that they are invited to return again next year. So we will be looking for you with my HAL equipment next year.

Operators were: WABFNE, WABTSX, WAB-TRV, WBBAPD, KBEUR, WBBID, KBYSE, WABMEM, KABKPS and from Michigan WD8-DBF.

Dwaine Modock, WA8MEM 28265 Gardenia Drive North Olmsted, Ohio 44070.

MODIFYING THE TS 830-S FOR NARROW IF

IN SSB MODE
BY JOHN DEVOLDERE, ON4UN

 $\sim\sim\sim\sim\sim$

The TS 830-S has the handicap for the enthusiastic RTTY operator in so far that the selectivity switch is one and the same as the mode switch, which prevents the use of the narrow filters in SSB RTTY (AFSK). A minor modification however allows using the narrow selectivity (one or two cascaded 500 Hz filters) in the USB (or LSB) position.

First a word about increasing the selectivity. Using the VBT (variable bandwidth tuning) and the IF shift, reasonable good selectivity can be

achieved (VBT fully counterclockwise, and IF shift at approximately 10 o'clock) but the shape factor is certainly not optimal and way below what can be achieved with narrow filters. CW filters can be obtained for the first IF (8,830.7 Khz) and second IF (455.7 Khz). Only the 500 Hz filters should be considered for RT(Y operation with 170 Hz shift (filters YK-88C at 8,830.7 Khz and YG-455 C). The 250 and 270 Hz filters are way too narrow for RTTY.

In order to be able to switch from wide (normal SSB selectivity) to narrow (one or both 500 Hz filters installed), a front panel switch must be made available. We have used the Digital hold pushbutton, next to the digital frequency display for this purpose.

The only hardware needed for the modification is a small relay with 2 sets of inverting contacts, the coil operating at 9 V.D.C. The relay can be installed on top of the YG-455 C (455 Khz IF) filter (can be glued to the filter).

Refer to the schematic and the TS 830-S instruction manual diagrams.

Cut the white-brown wire (carrying 9V in the SSB receiving position) at pin 2 (called SSB) of the connector nr 4 of the IF board.

Connect this white-brown wire to contact nr 4 (NC) of the relay. Cut the red wire (connecting the "digital hold" push-button switch to pin 1 of connector nr 1 of the counter unit) at the connector, and reconnect this wire to the coil contact nr 1 of the relay, which in turn is connected with a short strap to contact nr 6 (NO).

Connect coil contact nr 2 of the relay to a ground post.

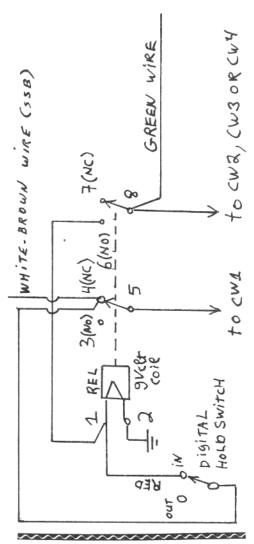
Cut the short wire connecting one of the contacts of the "digital hold" push-button to an adjacent ground post, and connect a wire from this switch contact to relay contact nr 4.

Remove the green wire (oroginally to be plugged into CW 1, CW2, CW3 or CW4), and solder it to contact nr 8, and using a suitable plug (or making a solder connection), connect this wire to either CW3 or CW4. Use CW2 if only the YK88 C filter is installed and use CW4 if they are both used.

Solder a wire to contact nr 5 of the relay and connect this wire to CW1.

This finishes the modification. The whole excercise should not take more than 45 minutes, and after completion with the "D.H." push-button out, the rig should operate exactly as before the modification. With the "D.H." switch in, however, the narrow filters are now operative in all of the modes (on reception).

John Devoldere ON4UN 215 Poelstraat B-9220 Merebeke, Belgium





Microprocessor-Controlled Communications

Terminal

The perfect addition to any amateur radio installation!
Complete, automatic send/receive of Morse code (cw)
Baudot code (RTTY) and ASCII code (RTTY). Works with any video monitor.

7-Channel Battery Back-Up Memory, the Theta 7000E has seven keyboard-selectable, non-volatile, random access memory channels each of which can hold 64 characters. Data in these memories is alterable at any time and is retained when power is removed. Messages in these memory channels can be repeated 1 to 9 times via keyboard command. All channels may be daisy-chained for continuous read-out. Channel number in use is indicated on display.

Wide Range of Transmitting and Receiving Speeds, 5 to 50 wpm in Cw with autotrack on receive. Standard RTTY speeds of 60, 67, 75, and 100 wpm Baudot code and 110, 150, 200, and 300 Baud ASCII code.

Self Contained Demodulator, three-step shift selects either 170 Hz, 425 Hz or 850 Hz shift with manual fine tune control of space channel for odd shifts. High/low tone pair select. Mark only or space only copy capability for selective fading.

CONVENIENT KEYBOARD FEATURES, automatic keyboard-operated transmit, (KOX) or manual keyboard transmit. Unshift on space, reverts to LETTERS case after reception of each space character in Baudot code. CR/LF is automatically inserted every 60, 72 or 80 characters while transmitting. Cw identification, in RTTY mode. Echo function, prerecorded cassette tapes can be read and transmitted. Test messages, "RY" and "QBF". Transmit word mode, characters can be transmitted in word groupings.





Crystal Controlled AFSK Modulator.

High Tone Pairs	Shift	170 Hz	425 Hz	850 Hz
	Mark	2125	2125	2125
	Space	2295	2550	2975
Low Tone Pairs	Shift	170 Hz	425 Hz	850 Hz
	Mark	1275	1275	1275
	Space	1445	1700	2125

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Line output, input levels as low as 15 mV rms (47 kilohm) will result in an output of 1 mW nominal into a 600 ohm balanced line. Output level adjustable by internal pre-set level control. Interfaces low level audio to RTTY

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9.0Z1CRL	217	247,680
10.LU1HCE	210	236,800
11.K7BV	225	231,385
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13.HB9CIH	208	220,440
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15.Y39U0	201	188,650
16.0Z9GA	176	160,860
17.DK1BX	151	149,240
18.G4CTQ	217	136,160
19.Y27NN/A	165	133,515
20.I4JXE	135	103,845
21.JA3AHQ	114	94,905
22.JH1BIH	122	88,750
23.JR2TZL	113	88,245
24.0N6HF	132	85,785
25.WB3FSN	131	82,800
26.W5HEZ	103	78,945
27.VE3CYX	106	74,880
28.WA4DRU	103	74,520
29.WB5HBR	107	72,500
30.G4KHX	115	66,960
31.GW3EHN	103	62,880
32.SM5FUG	98	54,540
33.Y39XN(?)	97	53,795
34.JA2VFW	76	52,030
35.XE1VV	87	47,300
36.Y43ZK	92	47,000
37.VK5IF	84	46,360
38.K6WZ	72	40,920
39.DF6AI	88	39,375
40.WA6WGL	64	34,650
41.Y33TA	67	29,200
42.WØLHS	70	33,250

Class B Mult	i operator	
1. LZ2KRR	301	380,600
2. SJ9WL	206	190,485
3. DFØMN	180	163,240
4. OK3KFF	188	155,770
5. Y21BB/A	146	114,245
6.HA5KBM	138	90,565
7.OK1KRY	114	56,160
8.HA6KVD	102	49,500
9.SP3KEY	83	45,225
10.HA5KKC/7	78	33,200
S.W.L.		
1. OK3-27olo	260	304,000
2.Ballenberg		282,975
3.0K1-11857		253,650
4.G8CDW	194	181,020
5.0ZDR2135	176	160,860
6. Y2-2814/M	159	143,370
7. DE1GMH	140	86,420
8. Wüstner		84,300
9. Y2-10521 (95	54,880
10.Y2-EA-1163		14,560
Check logs: S		SJOX, SM6ICD,
		J, Y64UL, Y46RF
I2JIN and OZ		
Th. 12460 A F	T C DIII	
The 12thS.A.F		.1.5
TEST Periods:		A 01
1. 0000-0800		
2. 1600-2400	CMT C A	August 21
3. 0800-1600 Bands:3,5-7-1	umi sun.a	lugust 22
Classes: A. s		
		igle transmitter
		ns must contain gns of all ops.
c. SWL's	ia carreré	giis or all ops.
Exchange: RS1	120 bas 1	2.5
-		own country (5)
		in same conti-
	,	er continent 15
		a and Australia
		l be considered
as a senarat	e country	. The same sta-
tion may be	worked on	ice on each band
		r credits. Only
2-way RTTY QS		
		DXCC list and
each district	in W/K.	VE/VO and VK.
		oints times sum
of multiplier		
		by October 10,
		ain: band, date
		exchanges sent
		and multipliers.
		r each band.Use
		scoring, clas-
		ame and address
		OZ2CJ. POB 717,
oena rogs to	bona Don	02200. FUD /1/,

DK 8600 Silkeborg, Denmark.

FSK POWER SPECTRUM

Terry Conboy, N6RY 2631 SW Orchard Hill Place Lake Oswego, OR 97034

As more interest is generated in using higher data rates and different data transmission codes, it may be of value to know how much bandwidth an FSK signal will occupy on the air. Knowing the shape of the spectrum of the transmitted signal is necessary to choose the required receiver bandwidth and to avoid slicing off too much of the signal power of the transmitted signal when using an SSB transmitter.

The actual picture of the FSK signal on a spectrum analyzer would be the best way to look at the bandwidth. I decided to buy a computer and some Ham equipment (and a couple of cars) instead of one of the fancy modern spectrum analyzers with a digitally stored CRT image. Since I did buy a computer, it seemed logical to use it to figure out the spectrum of the FSK signal.

The always—handy ITT reference data for radio engineers gives a simple formula for the levels of the side—bands of an FSK signal with square wave modulation. This is very much like what you would get if you sent the RTTY test where marks and spaces alternate. The start and stop bits in normal asynchronous RTTY add some out of sequence 1's and 0's that ruin the perfectly alternating pattern, but generally, the alternating pattern is near the worst case for occupied bandwidth.

The Basic program listing that follows allows you and your favorite data-cuisinart to calculate the sideband levels that you would see on the spectrum analyzer you didn't buy. I use the Cromemco 16K extended Basic, which differs somewhat (mostly in string handling) from the microsoftderived Basic's common to most of the home computers around. I tried to eliminate as much as possible the use of statements and commands that might cause dialect translation problems.

The program outputs the sideband number referenced to the middle of the spectrum, the frequency separation from the center of the spectrum, the sideband level in db, and the percent of the total signal power included up through that sideband (taking into account the power on both sides of the symmetrical spectrum).

Remember that the answers you get are for FSK (or AFSK on SSB). This is not what you would see using AFSK on FM. That is really a mess to calculate!

The sample run that follows the listing will allow you to verify that the program is running properly in your cray. Have fun.

List

10 REM F S K M O D . B A S

20 REM calculates the spectrum in db referred to the total power of an 30 REM FSK signal being modulated by alternating ones and zeros.

40 REM formula from ITT reference data for radio engineers.

50 REM virgin 1.0 N6RY August 10,1981 Portland, Oregon.

60 REM virgin 1.1 NGRY May 8,1982 Portland, Oregon.

70 REM

80 P=3.141592654

90 PRINT CHR\$(12);:REM formfeed to home and clear screen

100 PRINT "Mark-space shift ";

110 Input S

120 PRINT"bit rate (baud) ";

130 Input B

140 PRINT"NO.of sidebands ";

150 INPUT Q

160 R-S/B

170 T=0

180 PRINT

190 PRINT"SB freq level(db) % pwr

cocar

200 PRINT

210 FOR N=0 to Q

220 IF ABS(R-N) <1E-10 THEN R=R+1E-10

230 Z=((2.0♦R/(P♦(R^2-N^2))) SIN(P

(R−N)/2.0)))²2

240 T=T+200.0 Z

250 IF N=0 THEN T=T/2.0

260 M=4.342944819 LOG(Z)

270 F=N◆B/2.0

280 PRINT N;" ";F;" ";M;" ";T

290 NEXT N

300 PRINT

310 END

un

MARK-SPACE SHIFT ? 170 BIT RATE (BAUD) ? 110

NO. OF SIDEBANDS ? 20

SB	FREQ.	LEVEL	(DB)
0	0		-11.380543259018
1	55		-5.4241928196036
2	110		-7.9632786270371
3	165		-18.979806927946
4	220		-26.496458378917
5	275		-29.660329052062
6	330		-34.348069839461
7	385		-35.94358927396
8	440		-39.611539343265
9	495		-40.483444029426
10	550		-43.608319772935
11	605		-44.056255714143
12	660		-46.840268554093
13	715		-47.007817758546
14	770		-49.556919925787
15	825		-49.524669274206
16	880		-51.901675037429
17	935		-51.719588985629
18	990		-53.964927062607
19	1045		-53.666200569502
20	1100		-55.807474040639
0.0	5050		0. 0110 70741
	FREQ.		% PWR TOTAL
0	0		7.2768877223195
1	55		64.63709521979
2	110		96.604113761978
3	165		99.133598910798
4	220		99.581808417631
5	275		99.798078821091
6	330		99.871567935129
7	385		99.922462460458
8 9	440 •		99.944333834168 99.962226934316
-	495		
10	550		99.970940542315
11	605		99.978800214347
12	660		99.98294024103
13	715		99.986923588756
14	770		99.989138406545
15	825		99.991369732762
16	880		99.992660543269
17	935		99.994006623968
18	990		99.994809294445
19	1045		99.995669119188
20	1100		99.996194268247



MPC-1000R BY DOVETRON

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