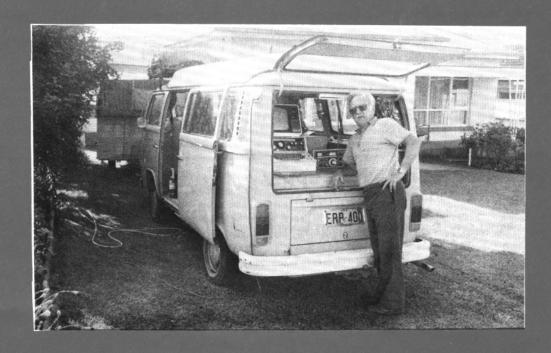
## Journal

YOLUME 30 NO. 5

75+

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PICTURED ABOVE IS VK2SG MOBILE WITH RTTY GEAR

CONTENTS

INTERPRETING RTTY WEATHER DATA

#### 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

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### HITS & MISSES **GEORGE**

GEORGE HAMMON, WASCOW

14215 Pecan Park Lane Space 73 El Cajon, CA 92021

The Annual Prestige Convention is over for another year. I sure enjoyed myself, met a lot of new friends and renewed many, many old friendships. I left San Diego on Thursday, April 1st with my wife Jeanne and DX Hound (Scamper) and made the drive to Las Vegas in our motorhome. It started raining (yes, sad to say, it does rain in sunny southern California) almost from our front door and turned to snow in the Cajon mountain pass and again in the mountains leading into Las Vegas. We were greeting with lots of sunshine and really nice weather for the rest of our stay. SAROC featured the following speakers: Lou McCoy W1ICP who spoke about antennas for the radio Amateur. Cable TV QRM by Richard Palm K1CE, RFI problems by Bill Nelson WA6FQG, Future of ARRL and Amateur Radio by David Sumner K1ZZ (ARRL General Manager), Amateur License Preparation by Gordon West WB6NOA. Tower Wind Loading by Clyde

The program by Bill was well attended as the interest continues to grow. Bill covers all aspects of RTTY in a very through and complete manner. If RTTY is your game or you're starting to get interested in this mode be sure to attend a program that

Blyleven WA60NZ, FCC Forum by John

Johnston W3BE and last but certainly

not least RTTY by Bill Henry K9GWT

(HAL Communications).

Bill is giving. He speaks at all of the major Amateur conventions. Stop by at the HAL Communications booth to say hello. The ARRL forum rounded out Saturdays activities and then there was the awarding of a nice list of door prizes.

#### TIL WE MEET AGAIN

I have tried to recall how many years that I have made the trip to Las Vegas. It must be at least twenty years. I have just turned fifty and completed twenty-five years in Amateur radio so the memory has started to fade.. Somewhere in those years I met Tex Kennedy N5TX and his wife N5DFG at SAROC. A very warm friendship was nourished by our common bond of Amateur radio and our wives love of Keno. Tex runs a company called Kennedy Associates In San Antonio, Texas. During the year between SAROC meets we both get caught up in the daily grind of earning a living. The time grows near for another SAROC Convention and I wonder if we will see each other. Somehow in that faceless crowd in Las Vegas, we always run into each other. Once again for the duration of the convention, two families play catch up on what's happened in the last year. The geography between Texas and California that has separated us melts. Tex's main interest in Amateur Radio lies in VHF, UHF and SSB, while I like RTTY, yet our common interest in Amateur Radio makes for lively discussions. The time passed all to quick as it's been known to do when old friends get together. Soon it was time for final goodbyes. Tex reminded me of his trip to Australia where he will operate as ZLOAFU and wife Ed, will be ZLO-AFV. This operation will be only SSB. (I really tried to operate RITY also) Tex and I shook hands, as we had so many times in the past and Tex said, "Till we meet again". Our families said their final goodbyes. How often my thoughts now reflect on that statement, "till we meet again". What a beautiful thought, succinct and yet so eloquent. We tread many paths in life and in particular the hobby of Amateur radio. The rewards are many: public service, DX, contesting to name a few. I personnally feel the most valuable reward in our hobby is the lasting friends we make, City, State, Continent and Worldwide. "till we meet again old friend".

#### STAMP COLLECTING

The hobby of Amateur Radio and Stamp Collecting have always been closely aligned. I have a very fine collection of stamps and I'm sure many of you do too. A new quarterly magazine devoted to the two hobbies is being offered. For details contact M. Bjerrang, LA5NM, Box N-9401, Harstad, Norway.

#### Syd Molen, VK2SG

Syd just completed an RTTY mobile trip. He was away for sixteen weeks. He drove four thousand miles north of Sidney to Cooktown, then back to Adelaide, 1100 miles west of Sidney. Syd worked all continents, and fortythree countries from the following areas: VK1, VK2, VK3, VK4 and VK5. The majority of his contacts were on 20 meters, running low power. Syd was the first VK to earn DXCC on RTTY. His current standing is 130 countries for 145 countries worked. VK2EG received the number two VK RTTY DX and currently has 100 countries confirmed for 108 countries worked.

Syd was the first VK station on RTTY so is in great demand to speak to Amateur Radio Clubs. He has given speeches to about ten clubs in the Sidney area, up and down the VK4 coast and also in the Adelaide are. Syd hopes thru his speeches more and more stations will get on RTTY.

Syd reports that VK2TTY is still doing the Sunday broadcasts on 7075, 21090, 14095 and 146.6MHz at 0300 UTC with a repeat at 0930 UTC on 3545 KHz and 146.6MHz. They also have a DX news broadcast at 21095 KHz at 0130 UTC. This is a repeat of the W1AW bulletin along with RTTY DX notes supplied by Syd.

continued on page 8



#### 

#### ev eoll

₩ØLHS SNYDER, 1514 S. 12th Street, Fargo, ND 58103



The Woodpecker is ON:

The Woodpecker is OFF!

The B.A.R.T.G. contest has been put away for another year. As always, the activity level was high, and all continents were up and running! One station mentioned that he had completed W.A.C. in only three hours. This caused me to look at my log, and by golly, I discovered I had set a new record for myself by working the six in one hour and forty minutes.

ON4UN (107/50) had a good time in the contest and reports making 359 contacts with a grand total of nearly 700,000 points; but alas, he was disqualified for not logging the GMT received. John's total includes: 20 QSO's with 10 countries on 80 meters and 36 countries with 15 countries on 40 meters. He has sent his score in to be used as a check log only. John now wishes he had read the rules a little more carefully.

There were a lot of good DX stations, both old and new in the B.A.R.T.G. KC4AAA from the South Pole FK8CK, UK2GAX (UQ2), 9M2CR, TU2JQ, YO3AC, FR7AT, HZ1TC, 4S7EA, OX3FG, HP1XJZ, Z21EK, VP2EV, OD5MN, and FP8HL to name a few of the contestants.

F8XT reports that DU2JM, VK8RF, HT5JAR, and FM7CD were heard or worked during the contest. Jean also indicates that YB9ACB should be active from Singapore with the call 9V1VC; and ZL4OY will take ZL1AFH's place on Campbell Island and should be on the air for the next six months. Jean also said that S32AC in Bangledesh is now on RTTY.

WAZETH must lead a charmed life. On two successive Sunday CQ DX calls he was answered by FK8BK and CR9AK. Fernando, CR9AK, has been quite active recently and types with a smile: "100 per cent of the active hams in Macao are on RTTY. Both of us!" I wonder if this is a trend for DX countries!

CR9AK suprised me by asking that I stand by for a friend who needed North Dakota. The station turned out to be a new one for me, VS6CT in Hong Kong. Philip can be QSL'd through his manager: KB9N, Cliff Donovan, RR4, Box 86, Kankakee, IL 60901.

The British Amateur Radio Teletype Group produces a bulletin which is transmitted by G3RED on Sunday at 1900Z. The frequency is approximately 14090.

The TRS-80 Color Computer is becoming very popular in my area. Most of the local hams are using software developed by K6AEP.

The S.A.R.T.G. W?W RTTY Contest which was previously announced for August 14th and 15th is actually scheduled for the weekend of August 21st and 22nd. Please change these dates on your calendar. This information is from OZ2CJ, contest manager of S.A.R.T.G.

UK3ACR, a Russian club station in Moscow has popped up recently. On opening day they worked in succession: F6DGH for their first contact, and WD8QDV for the first US contact. The brag tape lists a 200 watt transmitter, a twenty-tube receiver, a longwire antenna, a Siemans T-100 printer and a modem having 50 (sic) tubes! The members must have drawn straws to see who would operate, because they changed op's with each QSO.

 ${\tt K4VDM}$  had his QSL card to 9Q5HU returned marked, "not on RTTY." Could

it be that we have another pirate in our midst? I worked the same 9Q5 station on the 2nd of December. My card has not been returned as yet. I have reports of people hearing this station working 9Q5IH and HB9EO around 1830Z. So I wonder? I hope our suspisions are not true. I have also talked to others who have worked him, but no card as yet. Any Clues?

The other day, I had the displeasure to tune onto a station running a fundamentalist Bible Study Net. I listened for over twenty minutes and not once did the transmitting station sign his call, as required by FCC regulations. He spent the entire period hammering out a sermon and quoting from the Scriptures. I personally do not think Amateur radio is the place for the propagation of anyone's religion. If the transmitting station, K3ZVM, is a minister of the Gospel. then should such transmissions be counted as "business" use of Amateur Radio Bands?

WB3CCZ reports working A4XJL in the Sultanate of Oman during B.A.R.T.G.

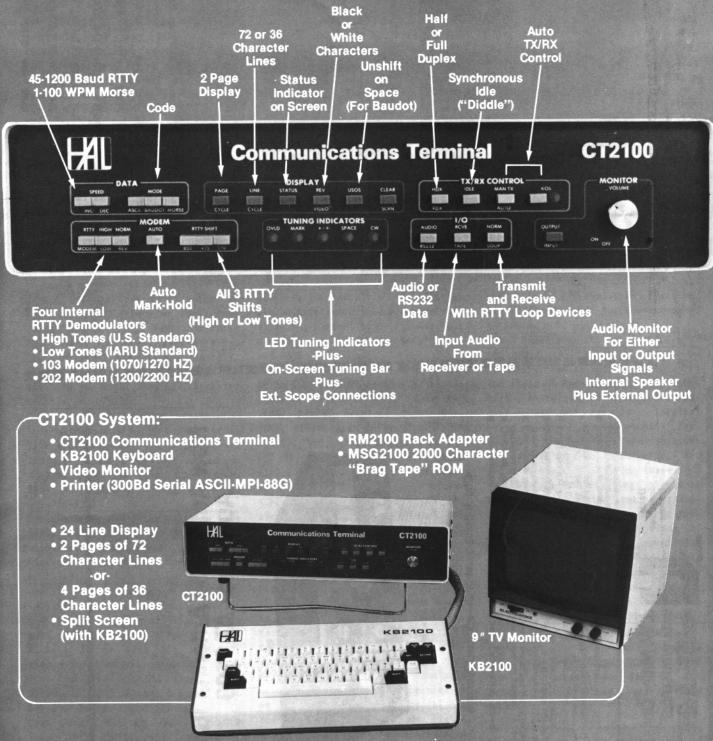
The Balearic Islands have been represented recently by EA6CE and EA5LC. Look for EA6CE around 1900Z on 15 meters. EA6LC can be QSL'd via P.O. N2. Alcudia, Mallorca, Spain.

YC2CGW, "Wawan" is on from Solo City, Java. He has been heard on 15 meters about 1830Z.

The next issue of the RTTY JOURNAL will contain a current listing of the DX Honor Roll. We invite all DXers to send in their score for inclusion. And while you are writing, please send any DX news, rumors or stories. This is your column, and we invite

continued on page 9

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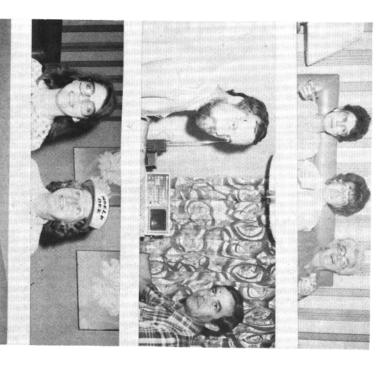
SOME 윾 THE GALS AND GUYS ATTENDING SAROC ΑT LAS VEGAS

ED, N5AEO, FRANCES, WD6FBJ AND XYL OF WB6CQW, JEANNE.

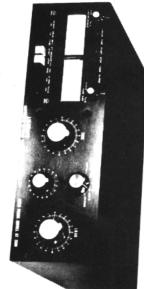
TOP TO BOTTOM, LEFT TO RIGHT ARE:

CARL, WA7HXS AND HARTLEY GARDNER, W100 BOTH OF PHOENIX, ARIZONA

- 3. ADRIENE, WA6YEO AND DEE N6ELP
- 4. EARL, N7SL, DUSTY, W7ITM, JERRY, WB6GAN AND PETER, K7AWI.



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RTTY GEAR: ICOM IC-701 dual VFO FSK \$575; ICOM IC-202S 2m SSB/CW, Nicads, OSCAR/RS coverage \$175; Drake R4B, T4XB, MS4/AC complete \$450; Drake T4XC, MS4/AC mint \$375; 30 xtals for R4A/B/C \$50; E-Tek digital for R4A/B/C \$110; Atlas 210X, mobile mount, mint \$350; Atlas 210/215 noise blanker \$40; YASEAU FT-202R/TTP, nicads, NC-1 base charger \$135; ICOM SM-2 microphone \$25. Bob, WA6ERB/5, POB 124 Belle Chasse, LA 70037. 504-393-8161 (e).

LIST OF WORLDWIDE RADIOTELETYPE STA TIONS IN FREQUENCY ORDER. (7th edition Klingenfuss). Over 2,067 frequencies of stations which have been logged in the last part of 1981. Frequency, call sign, name of the station, ITU country symbol, times of reception and details are included. All types of stations are listed, including schedules of 88 news agency stations on 741 frequencies. 178 special RTTY operation abbreviations are listed. A list of 208 GENTEX destination indicators is attached. Covers all RTTY stations from 3 MHz to 30 MHz, air, metro, government, military, diplomatic services. The only accurate RTTY list in existence. A must for the serious RTTY enthusiast. \$12 PPD. Universal Electronics, Inc, 1280 Aida Dr. #J, Reynoldsburg, OH 43068.(Dealer inquiries invited)

CALL SIGN LIST OF UTILITY STATIONS (7th edition) All RTTY stations, all services worldwide, more than 3,000 call signs in alphanumerical order. All types of stations are listed. 213 utility stations mnemonics and name abbreviations. Abbreviations for regional states in Australia, Canada USA and USSR. All ITU country/geographical symbols. Table of allocation of international call sign series, as decided at WARC 1979.Regulations for the formation of call signs. \$6.00 PPD. Universal Electronics, 1280 Aida Dr. #J, Reynoldsburg, OH 43068.

WORLD PRESS SERVICES FREQUENCIES LIST AND MANUAL. (New 3rd edition). A comprehensive manual completely covering the field of Radioteletype news monitoring-contains all needed information on antennas, receivers, terminal units, monitors, how to receive, frequencies and times of transmissions for most world radioteletype news and press services. Monitoring these news sources is fascinating shortwave listening. All listed stations transmit in English. Contains three different master lists of times of transmission, frequencies used plus the ITU list of over 80 different news services in all parts of the world. \$8.00 PPD. Universal Electronics, 1280 Aida Dr. #J, Reynoldsburg, OH 43068. (Dealer inquires invited). MODEL 28 ASR and Model 35 ASR com-

MODEL 28 ASR and Model 35 ASR complete and in good condition. Will deliver to Grand Forks, ND. Will swap for whatcha got? Wes Nowosad, 515 Selkirk Ave, Winnipeg, Man. 204-669-1675 Eves.

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HITS AND MISSES CONTINUED FROM PAGE

#### NORTHERN RADIO

In the last two columns I asked for information on the Northern Radio F.S. tone keyer. Well you have responded with a wealth of information. I wish to thank all of you that took the time to write. Thanks so much. I really appreciate all of the information supplied.

#### RTTY BEGINNERS HANDBOOK

Dee just completed the RTTY Beginners Handbook in time for SAROC. Dee did a really fine job. The price is \$8.00 US PPD. The beginner starting out in RTTY will really enjoy the information on the different RTTY machines. The more advanced Amateur will enjoy the information on stunt box modifications and RTTY microcomputing to name just a few.

DX DATA BASE FOR THE APPLE COMPUTER

I think that if you are like me and you operate in most contests. RTTY. SSB and CW, the need to organize your records becomes a necessity. I rejected paper records, books, charts etc. I wanted quick retrieval and so decided to let my Apple computer do the work. I have the Apple II plus with one disk drive with 48K of memory.

The next thing I determined was the records I' wanted to keep track of. I needed the call, date, time, band and mode also the QSL status. I wanted to be able to search or sort any of the above or combinations. I also wanted print-out capability for my Epson MX80 printer.

I started looking at commercial data base systems. I finally settled on the Synergistic Modifiable Database. The final decision was based on the following four factors: 1. responsive to my needs, 2. price, 3. speed, 4. flexibility.

The system is delivered with a master disk and a very complete manual. The setup procedures are very simple. The master disk is placed in your drive and you customize your system to fit your needs. You then take an initialized disk and copy this information. You now have your own custom DX data base.

A number of trade off's must be continued on page 10

your participation regularly. The Honor Roll format is like this: WOLHS 105/85 (worked/confirmed). Please send them in by June 1st.

I was happily ragchewing with Augustine, YJ8TT, when he abruptly disappeared from the band. Two days later I received a cablegram from him stating his transmitter had blown out and there was no service station handy in Santo. Augustin is a very active Ham, an excellent photographer and 100 per cent QSL operator. We hope his problems are solved, because we miss seeing his print around 1800Z on 20 meters.

WA3ZKZ (080/066), Crawford in Delaware have threatened to form a "Rare States Club" to help out those needing our "rare" states for W.A.S. We should solicite membership from Vermont, Wyoming, South Dakota and Ldaho because these seem to be the states most needed to complete the 50. Crawford has been absent from the "keys" for a few months but is now back, and he sends along a nice string of worked or heard stations. YO3AC, 9K2KA, FY7BC, CT1BBZ, KP4FKG, HP1XLL, HP1XJZ S83J, TF3KC and KP4CR. All of these on 20 meters. On 15 he adds: Y39YO, LX1MN, FG7BG, TU2JQ and GI4AHP. On 10 he found EA8RU, GM3ZXL and LZ1KDP.

A nice letter arrived from JA1MIN (102/102), Mic, who was one of the RTTY operators at CR9BH back in February, and also one of the DXpeditionary force to Wallis Island in 1981. After the operation at CR9AN, they left the Tono 7000E with CR9AN. Simao Simon is the first operator there, while his son, Alberto also operates the RTTY gear. Alberto, now in Portugal, is expected to return to Macau late in April, so we should have more activity from that part of the world. Martti, OH2BH, who also operated from CR9BH, took two CWR-685A Telereaders from HAL Communications back to Finland with him after the Macau operation. So there might be a possibility of a DXpedition to OJO or CT3.

Mic also indicated that the QSL manager for the FWOBK expedition of last year has about finished writing

all the cards and they should be in the mail soon. My card from Wallis arrived and I discovered that I had the honor of being the first Wallis Island-U.S.A. RTTY contact ever. I beat the pile-up on that one, by golly!

A RTTY DITTY......
The line I really hate to see, is, "good night, pile-up...QRT!"

A NOTE ABOUT CALLING "CODX": Sign your call <u>early</u> and <u>often!</u> This will give the potential answering station a chance to start swinging his beam before he calls you.

QUESTION: Do you, or do you not like the inclusion of name and QTH each time a station signs his call? HAVE YOU had this happen to you? A station signs his/her call when they answer your CQ, and before you can type it into a "here is" buffer, or even write it down, he hits a string of line feeds and wipes it off the screen?

DURING CONTESTS I invariably get a lot of copy like this: "RST TOO TOO TOO AT 1100 QQPP QQPP." We who use micros do not have to worry about the FIGS and LTRS key, but those with machines please... remember the special keys. Thank You.

MY MAIN pet peeve is the guy who sends line after line of RY's without signing his call. When you are scanning a band, it is nice to know who is sending those RY characters..perhaps you might want to call..or swing the beam....see?

IT HAS BEEN SUGGESTED that when returning to a station we let the carrier sit for a couple of seconds before transmitting any pulses. This is to help tuning in the signal, if necessary.

TI2WR. "Walt" in San Jose is back on the air again. Look for him Sunday at 1230Z on 20 MHz.

EAVESDROPPING: "I had no idea there was so much good DX on this mode. I figure it's because the people are so friendly and the rarer stations can chew the rag without a pile-up!"

5H3LM is on from Mbeya, Tanzania. He is going to be there one year and can be QSL'd: Lennart Mansson, POB 511 Mbeya.

MORE QSL INFO:

S83J, POB 750, Umtata, Transkei, South Africa....

TF3KC, Hermann, POB 1058, Reykjavik Iceland.

ZS2AB, Brian Weller, POB 10317, Linton Grange, Port Elizabeth 6015, South Africa. Include a green stamp. (I remember filming in the Snake Park at Port Elizabeth. I have a vivid memory of Johannes, the snake handler putting a cobra on top his military-styled hat and then letting the snake hunt for him!)

CN8BI QSL via IOUWG.

V2AW is the new call of VP2AW. Dorothy can be reached at box 229, Antigua, West Indies.

DU1EFZ, Edwin, POB AC-166, Quezon City, Phillipines.

FK8BK, Indosuez, Box G-5, Noumea, New Caledonia.

W2PSU (143/130), Ken, tells us he has had a banner year on RTTY DX, and from the list he sent along it is true! Ken has received his VP2 QSL direct from Angulla confirming the first stateside QSO ever from the island. His current total includes M1A from San Marino, 4S7EA and HZ1TC to pick out a few from his impressive list of contacts.

Z21CE is the new call of ZE1CE. He operates in the automatic mode, and has been logged around 0100Z on twenty. QSL box HG, Salisbury, Zimbabwe.

HZ1TC, POB 2572, Riyadh, Saudi Arabia.

In addition to those contributors quoted above, I would like to thank JA1JDD, W5HEZ, VK2SG, DE1KWD, K1NVY/7 W3KV and W2LFL.

PICTURESQUE PRINT: "After 40 years on Amateur Radio and only two weeks on RTTY, I've never been defeated by a machine, so I will keep fighting this monster!"

VK2SG (140/129) informs us that ZL4GF will go to Campbell Island, but no

HAM HELPS

dates have been set.

VK3JW is on most every day at about 1100Z on 20 MHz. He has a very consistent signal.

In our last column, we indicated there was some confusion about where to QSL XF4MDX. This was because there were more than one manager listed. But the RTTY cards are handled by Luis Salinas, Au de las Fuentes 298, Mexico 20, D.F., Mexico 04500, and it is a very nice card!

Two issues ago, I made a reference to the late Boyd Phelps, WOBP, as the Godfather of RTTY. Bob, WOHAH, a long time RTTY buff, sent along some fond memories of "Beep" which we are going to share with the readership in an upcoming RTTY JOURNAL. If anyone has any other stories about this fabulous character, please send them to me, and pictures too, if possible. In addition, I would like to have some of the real old-timers (are there any other kind? de ED.) who operated Model 14's get in touch with me. I'd love to swap yarns with them.

#### AWARD SECTION:

150 Country DXCC-RTTY endorsement to Norm Davis W1GKJ, dated 20 March,1982 Congratulations!

Overheard on the CW band:

FIRST FIST: " I got Navassa last week-end."

SECOND FIST: "If I were you, I'd go to the drug store and get something for it!"

73 and good hunting! Bill, WOLHS

#### KONTEST KORNER

DARC " CORONA" 10 meters	May 2
A. Volta RTTY Contest	T.B.A.
Armed Forces Day Test	May 15
VK/ZL HF Bands	June 12/13
DAFG 11th Short Contest	June 12
DAFG 11th Short Contest	June 13
SARIG	Aug. 21/22
DAFG 40 & 80 meters	Aug.29
DAFG 144 & 432 MHz	Aug.28
DARC "Corona" 10 meters BARIG Autumn Contest	Sept.4 Sept. 11/12

Aubrey Woodall, 307 N. Walnut, Little Rock, AR 72205 is looking for a source of Western Union wiring diagram 9100-C. He wants to wire KSR and reperf to their look and key from terminal look in terminal. It will be used to run RO/TD and computer input. Anyone out there to help?

P.S. Larry, K1LPS, another "rare state" member, has a suggestion: investigate W2AZX's DX Stamp Service. Send a SASE to 7661 Rodeer Parkway, Ontario, NY 14519 for his price list and information. Larry has been using the service and says he has been able to get a number of QSL cards which he was unable to with IRC methods.

Larry also is interested in 6 meter RTTY DXing. If you are into 6 meters and have done any RTTY work on that band, Please drop me a line, and we will pass along the information.

maintained to give you the maximum number of records in memory. An example of this is as follows: If the total record length is ten characters 2300 records can be stored in memory, if the total record length is 100 characters there is room for 230 records.

The following are the choice's I made

Name	Max.#	Characters Exple
Call	10	OK3/WA6CQW
Country	15	Czechoslovakia
Mode	4	RTTY
Band	2	21
Date	8	81/02/20
Time	4	1701
QSL	1	Υ

This allows me to have 613 records in each file. I then set up five files calling them: A to I, Japan, J to S, Russia and T to Z. This allows me to put 3065 contacts on one disk.

Once the data base is created the operation of the program is straight forward. The system is menu driven. The main menu offers choices of 1). Start a new file, 2)Enter records, 3)List/modify, 4)Search, 5)Sort, 6)

Print, 7) Disk access and 8) Terminate. The menu page also displays the number of records which can exist in memory and the name of the current file. When entering records you are prompted with a display of all the fields, Call, date, time etc., and the number of characters available for each, also a record number is displayed. You can edit the entries or return to the main menu anytime. Pressing the escape key will enable your return to the main menu.

The list/modify option is also easy to use allowing you to specify which record number to start with and to modify, delete or print any of the records as they appear on the screen.

The search function allows you to search the current file in memory or all files on one or two disk drives. The search option includes searching for a sub-string, one field, two fields or print out the results to the video display or printer.

The sort option will sort on one, two or three fields but will only operate on the file in memory.

The print option allows you to print one record or several on either one or two drives.

The disk access allows files to be saved, loaded or deleted. The program displays current file name and saves you retyping the file name if you are saving new or modified entries.

The terminate option reminds you when files have been modified, to save your data before you quit.

The catalog on this disk displays two additional programs. Modifier Module 1 and 2. Number one adds some accounting capability to your data base if needed. This allows printouts to be produced in a user defined format with the additions of numerical entries by row and column. The additions also include a search by numerical range and ability to alter individual entries by the addition. subtraction or multiplication of a constant. This module also allows you to provide for a dollars and cents formatted output with right or left justification in each column. I feel this module is of very little uses to a DX data base. Modifier Module 2 allows you to define a variety of printer output formats. This is the

INTERPRETING RTTY WEATHER DATA
Published by RTTY JOURNAL February
through April 1976.

Of all the commercial RTTY transmissions on the hf bands probably the most consistent are the data from the Weather Bureau. They are broadcast 24 hours a day on various frequencies between 3 and 30 MHz providing solid copy on one spot or another any time of day or night.

Most of the data is meaningless unless one knows the various codes to interpret it. Many of the transmissions consist of five character number groups and even careful study of these usually fails to reveal much sensible information unless at least some of the codes is known. This articles outlines some of the information collected from various sources.

#### STATIONS AND FREQUENCIES

These are the stations and frequencies with 60 WPM data:

WSY70-New York- 5940, 8110, 13620, 16250.5 and 20907KHz.

WBR70- Miami-6855 and 8105 KHz. WSY70-lists its frequencies during its station ID, while those for WBR70 are as measured on my receiver. WBR70 undoubtedly has other frequencies in use. Both stations transmit 45.45 baud RTIY with 850Hz shift. Both shift down in frequency on space for normal lower ssb copy.

#### U.S. GOVERNMENT HANDBOOKS

Complete information for reading the synoptic surface reports can be obtained from two U.S. government publications:

- National Weather Service Communications Handbook #4 Index numbers for North and Central America.
- Federal Meteorological Handbook#2 Synoptic Code.

Both are available from the Supt. of Documents, U.S. Government Printing Office, Washington DC 20402. This article is a summary of the information contained in these handbooks.

#### DATA FORMAT

In 1966 the World Metorological Organization (WMO) adopted a few changes in the form of message and the tables used in the synoptic re-

ports from land and ship stations when reporting weather. They became effective on Jamuary 1,1969 and the report form is now in use. These changes allowed for uniform reporting around the world while allowing individual member countries to meet their own special requirements for weather data.

The synoptic report format used in the Continental U.S. is as follows:

IIIII Nddff VVwwW PPTTT NhC1hCmCH TdTdapp (99ppp) 6PoPoPoPo (7RRRts) (8NsCHshs)(9SpSpspsp) (2R24R24R24R24R24) (3PwPwHwHw)(dwdwPwHwHw)(4TxTxTnTn) (Additional Plain Language Data).

This is called the primary synoptic report and contains all possible data. You will notice that WBR70 sends this sort of format. WSY70, however, sends a report referred to as the intermediate synoptic report which is an abbreviated form of the above. It only contains the first eight groups of the above listing—i.e. up to and including the 6PoPoPoPo data.

The groups in parentheses are optional or supplementary groups. They may or may not be included in the primary report for various reasons. For example, if the phenomenon has not occured they would be omitted. The first figure of each of the supplementary groups is the group identifier so that any of them can be dropped from the message while still being able to identify others which might be included. They are transmitted in order as shown 7, 8, 9, 2, 3, and 4.

#### TYPICAL DATA

Here might be a typical line of data from WBR70:

NNNZCZC

SMUS1 KSTL 110000

72465 80907 74216 22905 855// 02307 68927 70110 20001 44428;

Note that the only supplementary groups transmitted here are the "7" "2", and "4" groups. The semi-colon at the end of the line is the message separation signal. It is defined as Signal No. 22 (figures case position) of the International Telegraph Alphabet No.2. On Amateur communications machines this prints out as a semi-colon. On weather machines it is the

symbol for a scattered sky condition.

The following text covers interpreting the above report in terms of the code mentioned above.

#### STATION IDENTIFIER - IIiii

72465-- this is the identifier for Goodland, Kansas. The first two digits in this number specify the country or area of the world in which the station is located. These are called block numbers. Each block contains 1000 station numbers from 000 to 999. Block numbers for the U.S. and Canada are 72 and 74. In block 72 the numbers from 000 to 200 and 970 to 999 are presently not assigned. The numbers in block 74 are used whenever it is necessary to assign a new location where all the numbers appropriate in block 72 have been used. The station number of the nearest station in block 72 is subtracted from 999 and this number is assigned to the new station with a 74 block number. For example JFK airport in New York which is number 74486.

A fairly complete listing of these identifiers is included at the end of this article.

#### SKY COVER \* WIND GROUP Nddff

80907—this group gives the amount of sky cover, the direction and speed of the wind. In this particular case it is overcast with wind at 90 degrees (east) and at a speed of 7 knots.

The first figure, N, gives the total fraction of the celestial dome covered by cloud, irrespective of the cloud types.

0--no clouds

1--0.1 or less but not zero

2--0.2 or 0.3

3--0.4

5--0.6

6--0.7 or 0.8

7--0.9 or more

8--overcast

9--Sky obscured or amount cannot be estimated

"dd" gives the wind direction in even tens of degrees from true north. 36 indicates a north wind. Calm or no wind is indicated by 00. In 80907, above "09" indicates 90 degrees. "ff" gives the wind velocity in knots. For calm conditions 00 is sent. From 0 to 99 knots the velocity is coded direct. If the wind is 100 knots or more, 50 is added to the numbers for the wind direction and the speed over 100 knots is sent for the velocity. Of course wind speeds in excess of 100 knots are extremely rare. 1 knot is equal to 1.1508 miles per hour.

VISIBILITY \* WEATHER GROUP- VVwwW

74216-- This indicates a visibility of 24 kilometers or about 15 miles. The present weather indicates rain within the hour before the observation. The weather for the past six hours since the last report has generally been rain.

VV gives the horizontal visibility direct in kilometers and tenths of a kilometer up to 5.0 kilometers. Thus, a visibility figure of "24" would indicate 2.4 kilometers. Note that since 0.1 kilometer is very near equalling 1/16th of a mile, the visibility numbers below 50 can also be read in 1/16ths of a mile. Thus "24" would be about  $1\frac{1}{2}$  miles. Above 5.0 kilometers and up to 30 kilometers visibilities are reported in whole kilometers starting with 56 indicating 6 kilometers, 62 indicating 12 kilometers, etc. 80 then indicates 30 kilometers. Then from 81 through 88 the numbers jump by 5 kilometersthus 81 is 35, 82 is 40 kilometers etc. A figure of 89 indicates a visibility of greater than 70 kilometers  $(43 \ 3/4 \ miles).$ 

Visibility numbers between 90 and 99 are only used in reports from stations at sea such as ships and weather buoys.

- 90 less than 50 meters
- 91 50 meters
- 92 200 meters
- 93 500 meters
- 94 1 kilometer
- 95 2 kilometers
- 96 4 kilometers
- 97 10 kilometers
- 98 20 kilometers
- 99 50 kilometers or more

The two digits for "ww" in the visibility weather group indicate the present weather and in some cases the weather within the hour preceding the observation. In general, numbers from

00 to 49 indicate there is no precipitation at the station at the time of observation. Numbers 50 to 99 indicate precipitation at the time.

Reports of 00, 01, 02 and 03 when ssent give the characteristic change of the state of the sky during the past hour.

- 00 cloud development not observed or not observable.
- 01 clouds generally dissolving or becoming less developed
- 02 state of sky on the whole un-
- 03 clouds generally forming or developing.

These numbers are often reported when there is no significant weather at the time of observation.

Other code numbers for present weather are included in a separate table at the end of this article.

The last digit of the visibility weather group describes the general character of the weather during the last six hour period.

- O cloud covering  $\frac{1}{2}$  or less of the celestial dome through the period
- 1 cloud covering more than  $\frac{1}{2}$  of the celestial dome during the period and covering  $\frac{1}{2}$  or less during part of the period
- 2 cloud covering more than  $\frac{1}{2}$  of the celestial dome throughout the period
- 3 sandstorm, duststorm or blowing
  snow
- 4 fog, ice fog, thick haze or thick smoke
- 5 drizzle
- 6 rain
- 7 snow, rain and snow mixed, or ice pellets
- 8 showers
- 9 thunderstorm, with or without precipitation.

PRESSURE - TEMPERATURE GROUP - PPPTT

22905 - this indicates a pressure of 1022.9 millibars and a temperature of 5 degrees Celcius.

The first three digits "PPP" code the air pressure directly in millibars and tenths of a millibar. For pressure above 1000 millibars, the "10" is omitted. Likewise for pressures under 1000 millibars the first 9 is omitted. For example 988 would be 998.8 millibars. Note that this pressure reading is reduced to sea level. This is the pressure reading

given in TV weather reports and puts all pressures into a common reference for comparison. The group starting with a 6 described later gives the true station pressure.

The last two digits of this group give the temperature reported in degrees Celcius. For minus temperatures 50 is added to the absolute value of the reading. Thus -8 degrees would be reported as 58. 72 would be a temperature of -22 degrees Celcius. -50 degrees is 00/ and temperatures below this are reported in the amount they exceed 50 below.

CLOUD GROUP - NhClhCmCh

The study of clouds is more complex than might be supposed so a general coverage is presented here. More data may be found in Federal Meteorological Handbook #2 listed above.

The first digit Nh gives the amount of sky cover due to Cl (low clouds) or Cm (middle clouds). Ch indicates high clouds, and these are never included in the value for Nh.Low clouds present give an "N" value. Codes for these are the same as given for N in the Nddff group. In general heavier clouds are described by increasing numbers, If there are no clouds in a given range, a zero is reported.

The middle digit of this group, h, reports the height of the lowest cloud base according to the follow-code:

- 0 -- 0-149 feet
- 1 -- 150-299 feet
- 2 -- 300-599 feet
- 3 -- 600-999 feet
- 4 -- 1000-1999 feet
- 5 -- 2000-3499 feet
- 6 -- 3500-4999 feet
- 7 -- 5000-6499 feet
- 8 -- 6500-7999 feet

 $9\,$  --  $8000\,$  feet or higher or no clouds. Low clouds less than  $6500\,$  feet, middle clouds  $6500-20000\,$  feet and high clouds above 20,000 feet.

HOPE THAT THIS HAS WHETTED YOUR AP-PETITE FOR NEXT MONTHS CONTINUATION.

#### 

The RTTY BEGINNERS HANDBOOK IS AGAIN AVAILABLE. PRICE IS \$8.00 U.S. FUNDS POSTPAID TO U.S. ADD \$2.00 FOR ALL OTHERS.

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**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.





Model 7000 Drake Theta 7000E Terminal Model 7009 Drake TR-930 Video Monitor

#### 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

 Printer Interface for Hard Copy, all modes for parallel ASCII printers. Loop keyer for conventional teleprinters. • Composite Video Output, for any standard video monitor. • Kansas City Standard AFSK Output, KCS tone pair for ASCII. • Large Capacity Display Memory, two page display memory contains 32 X 16 lines per page. • Split-Screen, with a keyboard command, the display can be divided in two; the upper half for transmit and the lower half for receive. Messages can be composed while receiving. • Buffer Memory, 53 character type-ahead keyboard buffer. • Word Wrap-Around, in receive mode, word wrap-around prevents the last word on a line from becoming split in two. Moves whole word to next line. • Automatic Letters Code Insertion, if desired. LETTERS (diddle) code can be transmitted continuously in a pause of transmitting from the keyboard. • Audio Monitor, a built-in audio monitor circuit with automatic transmit/receive switching enables checking of the transmit/receive tones. • Transmitter Keying Circuitry, keys either grid block, cathode keyed, or solid-state transmitters. • Power Requirement, The Theta 7000E requires only 13.6 Vdc @ 1 amp. Plugs into 13.6 Vdc accessory jack on PS7 or PS75 power supplies. Effective Packaging for RFI Protection, well designed metal cabinet and protective circuits prevent RFI. • Terminal Size: 15.8"W x 11.8"D x 4.7" H (40 x 30 x 12 cm) • Weight: 11 lbs (5 kg) • Monitor Size: 8.7"W x 9.8"D x 8.9"H (22.1 x 24.1 x 22.6 cm) • Weight: 11 lbs (5 kg)



#### Model 1230 LA7 Line Amplifier

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

terminal unit or phone line that requires a 600 ohm balanced/unbalanced input. One 36" phono to phono cable supplied. • Size: 4.5"L x 1.3" H x 2.5"W (11.4 x 3.3 x 6.4 cm). Weight: .3 lbs. (.14 kg).

Specifications, availability and prices subject to change without notice or obligation.





## VHF COLUMN by JOHN

JOHN CUNNINGHAM, WA9WJG POST OFFICE BOX RY PERRYSVILLE, IN 47974

Believe it or not spring is here, the calendar says so. I know about half of the U.S. has doubts about the accuracy of this. The fish are starting to move in the Wabash River so I'd say that is a sure sign that spring is really here.

With the arrival of warmer weather comes Hamfest season. Of course, the biggie id Dayton. Boy the RTTY gear is always great at Dayton. Those guys haul it in by the truck load. Be sure that you take a truck with so you can take a truck load home with you.

I just received the "WATTS HAPPEN-ING" from Stark RTTY Group. They really know how to put out a newsletter, would you believe 17 pages? Another unbelievable thing, they dropped their club dues from \$20.00 to \$6.00 per year.

I will mention some of the interesting items from their nresletter.

#### RIG SERVICE

- 1. Approach the ailing equipment in a confident manner. This will give the instrument the (often mistaken) idea that you know something. This will also impress anyone who happens to be looking, and id the equipment should suddenly begin working, you will be credited with the repair. If this step fails proceed to step 2.
- 2. Wave the "HANDBOOK" at the instrument at the instrument. This will make the equipment assume that you are at least somewhat familiar with the sources of knowledge. Should this step fail proceed to step 3.
- 3. In a forcible manner, recite OHM's law to the instrument. (Before taking this step, be sure to refer to a reliable handbook and be sure of your knowledge of OHM's law. This will prove to the equipment beyond a shadow of a doubt that you do know something. This is a drastic step and should be taken only after steps one and two have failed.
  - 4. Jar the equipment slightly. This

may require anything from a three to a six foot drop, preferable onto a concrete floor. However, you must be careful with this step because, while jarring is an approved method of repair, we must not mar the floor. Again, this is a drastic step, but if all else fails, there is nothing more to do but move on to step 5.

5. Add a tube, transistor, resistor or capacitor. This will prove to the instrument that you are familiar with instrument design. Also, this step will give the equipment an added load to carry and will thereby increase your advantage. If that fails to work somehow you must proceed to the most drastic step of all. Seldom needed, it is to be used only as a last resort!!

#### 

"Q" SIGNALS YOUR ELMER NEVER TAUGHT

QCK- don't bother trying to listen on the other sideband; I am a duck! QIK- please stop transmitting at this time. You are boring.

QBL- sorry, I can't QSL. I'm not licensed!

QOL- Your signal is so strong it just blew out my front end, and I'll be seeing you in court!

 $\ensuremath{\mathsf{QFF-}}$  Please send louder; there is a French Fry in my ear!

QOD- sorry about my sloppy sending, but I'm high on drugs at this time. QHT- please stand by, my antenna has just fallen into the bathtub!

QDR- I have traffic from Stonehedge. Do you speak Druid??

QME- sorry about taking so much time to come back, but I had to go out and milk the elk!

 $\ensuremath{\mathsf{QHI-}}$  please tell funnier stories at this time.

QHH- please increase your power/talk louder. It's hard to hear you ove the tinkling ice cubes and ripping clothes!

QCT- your RST isn't much, but you're

coming in fine on channel 2! QDT- I see you're having difficulty tuning up. Please consider an easier task like watching TV or counting your toes!

SEE YOU ALL AT DAYTON?? JOHN, WA9WJG

HITS AND MISSES CONTINUED

Handy to report generation or typing of printed forms. This is the module that we will be using in the DX data base.

Now that you have an understanding of how the program works, let's go back to the area where we first set up the data base. I used a total of 44 characters to comprise each record. This was a trade off in many ways. It would have been nice to have the zone or lets say the continent listed. But the need to use the least amount of characters is of paramount importance to gain the largest number of records. So those items were expendable. I choose 10 characters for the call field to allow me some flexability with calls encountered on Dxpeditions for those calls must be entered as follows: OK3 WA6CQW. This is necessary if you sort by call. The country field having 15 characters allows me to type in the largest names like Switzerland orCzechoslovakia as I don't personally like abbreviations. If you can live with abbreviations and remember what they are fine. The other records need no explanation except for date. The input must be: year, month and day, allowing you to sort by year. Time is, of course, in UTC.

When entering data in a file from record to record having duplicate information, press the colon (:) key, and let the computer do it for you. Send SASE for a list of reading material concerning this program. WA6CQW.

#### 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



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