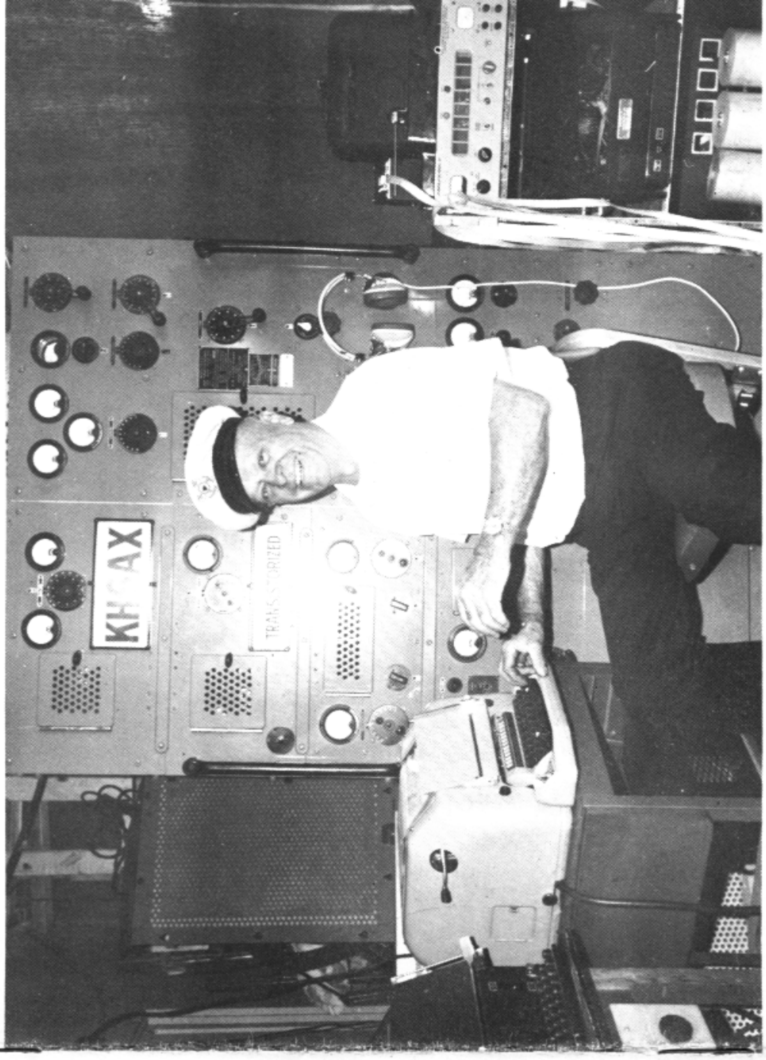
RTTY



FREEMAN LANG, KH6AX

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NEWS OF AMATEUR RTTY

MAY, 1965
30 Cents
Vol. 13, No. 5

HORSE TRADES

This page of the Bulletin is for use of amateurs who have RTTY EQUIPMENT FOR SALE OR TRADE and those looking for equipment to buy or trade. It is a free service and may be the means of getting someone on the air.

FOR SALE: Teletype loop supply, REC29/RA87, 110 VDC at 400 ma. Exc. condx, $6.00. Teletype paper for ham or commercial use, standard roll, $0.85/roll. $8.00 case. Transmitting tubes, new only, best prices, write for catalog. e.g. 6146–$2.55, 417A–$3.95, 6CW4–$1.45. Navy FRA frequency shift converter (IF), like new, best offer or trade – manual included. DM-35 new, $6.00. W2DLT, 348 Essex Street, Sirling, N. J. 07980.

FOR SALE: Aluminum 20/60MA Model 15. Model 14 typing reperf. Trans-dist. All machines like new and ready to go. Kleinschmidt model 150 complete mint condition, $200.00. Want 28ASR. K6PZT, 9337 Gotham Street, Downey, Calif. TOpaz 9-3292.

FOR SALE: Matching gear and pinion for 15, 19 or 14 reperf. $3.00. Will swap 28 LXD for a Bird Model 43 Watt-meter. W9YVP, 11001 S. Pulaski, Chicago, Ill. 60655.

WANTED: Model 20 printer, reperf or other six level gear. W0KXB, 1300 Garfield, Topeka, Kansas 66604.

FOR SALE: 1500 Cycle mechanical filter for Collins 75A4, $30.00. 500 cycle, $40.00. K6KII, Box 307, La Canada, Calif. 91011.

WANTED: RTTYs, August 1956, January 1961. W6BWQ, 6449 Graves Avenue, Van Nuys, California.

FOR SALE: One Model 15 Teletype $75.00, one Model 14 reperf, $50.00. One model 28 reperf, $100.00. Two Model 14 TDs, $50.00 each. All have been overhauled and are in top condition. WB6DRY, 2135 Oxnard Blvd., North, Oxnard, Calif. Phone 485-4737.

WANTED: Model 15 in working order for radio club with limited finances. Must be packed for truck shipment. Harold Lund, ZD8HL, RCA, Ascension, Patrick AFB, Florida 32925.

FOR SALE: OR TRADE: TU model 1946 Radio Frequency Lab. Shift 800-600-400 cps. Regular net $365.00, Model 1601C-TR Radio Frequency Lab shift 85 cps with audio oscillator, regular $435.00. Slightly used by Collins only, make me an offer on this commercial equipment. W0NHP, 7205 Center Drive, Des Moines, Iowa 50312.

RTTY, INC.
372 Warren Way
Arcadia, California 91007
Return Postage Guaranteed

Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D. C. 20554

In the Matter of Amendment of the Amateur Radio Service Rules to provide for Incentive licensing and Distinctive Call Signs	S FCC 65-252 65220 DOCKET NO. 15928 RM-378, 455, 470, 474, 480, 481, 499, 516, 517, 538, 577

NOTICE OF PROPOSED RULE MAKING

By the Commission:
Commissioner Loevinger absent.

1. The Commission has under consideration nine petitions proposing, to varying degrees, that special privileges be given to the holders of Amateur Extra Class licenses as an incentive for licensees to obtain this highest class of Amateur operator authorization. Many of the petitioners additionally propose that, as a stepping-stone to the Amateur Extra license, another higher class of operator license be created which would also carry special privileges as an inducement to its attainment. A number of the petitioners recommend changes in the procedure for assignment of station call signs to correspond to a new license structure.

Since we shall consider the call sign problem in this connection, we will also consider RM-470 and RM-474, petitions which are solely concerned with the call sign assignment procedures. The attached appendix lists the petitioners.

2. To support their proposals, the petitioners essentially contend that there is a need for a general improvement and "up-grading" of operations in the Amateur Radio Service which can best be fulfilled by establishing an "incentive licensing" program. They maintain that amateur operators will thereby be encouraged to self-improvement by qualifying for higher classes of licenses. The chief proponent of these views is the American Radio Relay League (ARRL), a national Amateur radio organization with approximately 85,000 members. In its petition, RM-499, the ARRL states:

"A most significant trend has developed in the last few years which has caused increasing concern to the League as to whether the basic purposes and objectives of the amateur radio service, particularly those relating to technical qualifications and proficiency, as set forth in subparagraphs (b), (c) and (d) of Section 12.0 [97.1] are being and may continue to be adequately achieved.

This trend has arisen from two developments, . . .

In 1951, the Commission after an extensive rule making proceeding in Docket No. 9295, adopted major changes in the amateur license structure. Both lower-level (Novice and Technician) and higher-level (Amateur Extra) classes were established with commensurate examination requirements. All frequency bands and all modes of operation were made available equally to the Amateur Extra, Advanced, General and Conditional Class. Although special privileges were contemplated by the Commission for the new Amateur Extra Class, none has yet been adopted. Thus, once an amateur has obtained his General or Conditional Class license he no longer has any practical or meaningful incentive to increase his technical knowledge and proficiency and earn a higher grade of license.

The second development contributing to the trend is the development and availability of highly complex and efficient manufactured equipment, particularly single sideband suppressed carrier (SSB) radiotelephone transmitters, receivers and transceivers. The design and construction of many equipments are so excellent and the operation is so simple that it no longer is necessary for an amateur using such equipment to have practical knowledge sufficient to construct his own equipment or to even fully understand the circuitry and theory of operation of the manufactured equipment. As a result, there has been little incentive for many amateurs, once licensed, to increase their technical knowledge and proficiency as contemplated by subsections (b), (c) and (d) of Section 12.0 [97.1] of the Commission's Rules."

3. A summary of the specific pertinent proposals in the petitions under consideration is as follows:

a. Six petitions (RM-455, 480, 499, 516, 517, 538) propose that the Advanced Class license, which has not been issued to new applicants since 1952, be again made available but as a new higher class of authorization with special privileges. Some of the petitioners would "grandfather-in" the present holders of the old Advanced Class license (about 40,000). While the suggestions vary as to the type of examination which would be required for this new Advanced Class license, they generally contemplate a difficulty level somewhere between that of the examinations for the General and Amateur Extra Class licenses.

b. RM-577 advocates that there be both an "Extra Phone" and "Extra CW" license, both licenses to be issued to present holders of the Amateur Extra Class license. Other persons could then apply for either or both licenses depending upon the type of operation desired.

c. With regard to the nature of the privileges for these higher classes if licenses, six petitions (RM-455, 480, 481, 499, 516, 517) propose the reservation of portions of high frequency (HF) telephone bands between 3.5 and 29.7 Mc/s. RM-455 would additionally reserve HF telegraphy segments for the Amateur Extra Class. RM-538 and 577 recommend reserved telephony and telegraphy sub-bands in all, or most, of the bands below 148 Mc/s for the Amateur Extra Class. Three petitions (RM-455, 499 and 516) would leave the width of the present HF telephony sub-bands unchanged but available only to Advanced and Extra-Class operators while three others (RM-481, 517, 577) would expand the width of the telephony bands but reserve only portions thereof to the Advanced and Extra Class. Two petitions (RM-481 and RM-577) recommend that the reserved telephony segments be restricted to single side band or suppressed carrier emissions. RM-499 and RM-516 propose a staggered timetable for implementation of the reservation of the telephony bands.

d. RM-378 proposes that two-letter station call signs (call signs with a single letter prefix and a double letter suffix) be issued to holders of the Amateur Extra Class license. A number of the other petitions also recommend new call sign assignment procedures which relate to the "incentive licensing" program.

4. The proposals for an "incentive licensing" program have generated the largest number of comments and the greatest controversy in an amateur rule-making matter in many years. Nearly all of these comments are in response to RM-499, the ARRL petition. A large number of persons, about equally divided, merely approved or opposed RM-499. Of those who gave reasons for their opposition, only a very few apparently felt that an "incentive licensing" program was not desirable or was unnecessary. These persons either thought that amateur radio operations were presently satisfactory or that methods other than "incentive licensing," such as requiring an examination for license renewal, would cure any ills. Many objectors to the ARRL proposal stated that the reservation of frequency bands to higher class licensees to the extent advocated by the League would unduly encroach upon the operating privileges of the lower classes of licensees. They maintained that loss of these most desirable frequency bands would force licensees to acquire higher classes of licenses in order either to utilize their equipment or to enjoy the most rewarding aspects of amateur radio operation.

Endorsement of the ARRL position was received from many persons of widely diversified interest in the Amateur Radio Service.

a. From a retired former Chief Signal Officer of the Army:

"During the early years of my military career (the 1930's) whenever an individual who possessed a radio amateur license came to my attention I did my utmost to have the individual assigned to communications work. His license spoke well of his technical understanding and intense interest. During the latter part of my career (the last decade or so) such has not been my feeling. The license has generally meant 'Here is another hobbyist — maybe he has it and maybe he doesn't.' The license has lost its stature; it appears to be anybody's, just for the asking . . ."

b. From the Bar Association Librarian of a large city:

"It does not disturb me that for a time I may be precluded from operating in certain bands until I have demonstrated that I am able to understand and therefore successfully negotiate more advanced requirements. May I say here that I do not believe the reliability of commercially produced equipment to be any excuse for ignorance in its operators.

"I see every reason to believe that the amateur service would flourish under an incentive program. In this era of continuously pressed demands for increased competence in every area of activity, I cannot see how amateur radio can prosper if it adheres to the comfortable ways of yesterday."

c. From the president of a leading electronics manufacturing company:

"A decade ago when a licensed radio amateur applied to the company for employment, mere possession of a 'ham ticket' was sufficient guarantee that the holder was technically competent, could read a schematic, had the capability to learn, and was capable of mature growth in the industry. Many of today's leaders in the electronics field advanced along this very path. Now, although the electronics industry is in chronic shortage of trained technicians and engineers, by and large, applicants for these jobs are not coming from the ranks of the radio amateur. Possession of a radio amateur license does not now mean that the holder is technically qualified in any sense. On the contrary, the Personnel Department of this Company has been continually disappointed with the quality, calibre and technical ability of holders of radio amateur licenses to such an extent that such individuals are subject to careful screening before they are considered for employment."

d. From a college engineering and technology educator:

"As a college instructor, we automatically assumed (and with good basis) that an engineering student who was also a radio amateur, would be a highly capable student willing and able to accept the loads and responsibilities of an engineering program. This idea to an even higher degree was present when the new student possessed a license of one of the more advanced classes . . .

"In contrast, today we in education almost prefer not to have our students come to us with amateur radio licenses. Typically, today's ham is concerned with contests and chatter and knows little or nothing of theory and construction. His approach to study and lab is hit-or-miss or the try-this-or-that approach. He appears never to have tried to understand the basis of electronics to say nothing of his equipment itself. He has probably never wired anything more complex than a cable or two and would not consider the modification or service of even his personal receiver. He simply wouldn't know how and is not really interested in it beyond its function of reception."

e. From the Communications director of a state Civil Defense department:

"The . . . Division of Civil Defense values very highly the service rendered to our organization by amateur radio operators through the Radio Amateur Civil Emergency Service. Without this Service our emergency communications would be severely handicapped. The reservoir of trained technicians, available within the amateur radio service, is of immeasurable value to the success of our civil defense program in (the State).

"With this thought in mind, it is felt that any attempt to up-grade the amateur service will ultimately result in a higher grade of trained personnel which may be called upon in time of national emergency . . . Therefore, I would like to recommend immediate adoption of the suggestions contained in their proposal, and further recommend a complete revision of the examination material with the view of increasing the scope of the examination as well as the degree of difficulty of the questions contained therein."

5. The Commission has carefully considered each of the subject petitions and the documents in response thereto in the light of its responsibilities under the Communications Act to regulate the use of the radio frequency spectrum in the public interest, convenience, and necessity. It is altogether clear that justification for the continued allocation to the Amateur Radio Service of a substantial portion of the spectrum in the face of incessant and important demands by other radio services can not be founded on anything other than a continuing movement of the Amateur Service toward the goals specified in Section 97.1* of the Amateur Rules. It is the Commission's opinion that revision of the present license operating privilege structure is an appropriate and desirable step to take at this time to insure such progress and place a proper emphasis upon the quality of the service as well as upon its mere numerical growth and activity. Accordingly, we propose to revise our rules to provide for higher classes of licenses with special privileges as an incentive to the general "upgrading" of licensees. We propose, additionally, to revise the privileges and term of the Novice Class license, to modify a basis of eligibility for the Conditional Class license, and to provide for distinctive station call signs. These latter proposals are all considered to be consistent with, and necessary to, an incentive licensing program.

*"§97.1. Basis and purpose. The rules and regulations in this part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles: (a) Recognition and *enhancement* of the value of the amateur service to the public as a voluntary non-commercial communications service, particularly with respect to providing emergency communications. (b) Continuation and *extension* of the amateur's proven ability to contribute to the advancement of the radio art. (c) Encouragement and *improvement* of the amateur radio service through rules which provide for advancing skills in both the communication and technical phases of the art. (d) *Expansion* of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts. (e) Continuation and *extension* of the amateur's unique ability to enhance international good will." (Italics supplied.)

It has been suggested in some of the comments that, although there is a need for improvement of licensee knowledge and proficiency in the Amateur Radio Service, rule changes are not appropriate since the licensees should adopt their own program for improvement. While, of course, self-initiative by licensees is vital, we cannot agree that Commission action is inappropriate. Section 97.1(c) of the rules clearly contemplates the improvement of the Amateur Radio Service through rules which provide for the advancement of skills in both the communication and technical phases of the radio art.

6. In consideration of the foregoing, the Commission proposes amendment of its Amateur Radio Service Rules as follows:

A—A new higher class of license to be designated the Amateur First Class license shall be created. Eligibility for this license shall be limited to an Advanced, General or Conditional Class licensee who has held such license for at least one year. Examinations for this license will be conducted at Commission Field Offices or examination points. Applicants will be required to pass a 16 word per minute code test and a written examination of a difficulty level between the General and Amateur Extra Class examinations.

B—Holders of either the Amateur Extra Class or the Amateur First Class license shall be exclusively entitled to utilize the frequency segments 3800-3850 kc/s, 7200-7225 kc/s, 14200-14235 kc/s, 21250-21300 kc/s, 50-50.1 Mc/s, and 144-144.5 Mc/s effective one year after adoption of these rule changes, and, 3800-3900 kc/s, 7200-7250 kc/s, 14200-14275 kc/s, 21250-21350 kc/s, 50-50.25 Mc/s, and 144-145 Mc/s effective two years after adoption of these rule changes.

C—Holders of the Amateur Extra Class license shall be exclusively entitled to utilize the frequency segments 3500-3525 kc/s, 7000-7025 kc/s, 14000-14025 kc/s, and 21-21.025 Mc/s effective one year after adoption of these rule changes, and, 3500-3550 kc/s, 7000-7050 kc/s, 14000-14050 kc/s, and 21-21.050 Mc/s effective two years after the adoption of these rules changes.

D—The Advanced Class license shall no longer be renewed. Present holders of this license shall be issued the General Class license upon renewal. The basis for this proposal is that there no longer exists any valid distinction between the Advanced and General Class licenses as to the difficulty of the examination. Therefore, continued issuance of the Advanced Class license has become an unnecessary administrative burden and, under an incentive licensing program, would merely lead to confusion.

E—The Conditional Class license shall no longer be available to new applicants who claim eligibility solely by virtue of active duty in the military service. This proposal is consistent with the Commission's policy that, where feasible, applicants for higher classes of amateur licenses be examined by Commission personnel rather than by volunteer mail examiners. Of course, many military members will be able to establish their eligibility for the Conditional Class license under one of the other categories such as the distance basis or temporary overseas residence.

F—New holders of the Novice Class license shall be given a two-year non-renewable term. This will afford Novice Class licensees a more reasonable period for the development of skills necessary to advancement to the higher classes of licenses.

G—Effective one year after adoption of these rules, telephony privileges for the Novice Class licenses in the frequency segment 145-147 Mc/s shall be deleted. Deletion of this privilege is proposed because too many Novice Class licensees operate telephony equipment to the neglect of improvement of their telegraphy speed. One of the prime purposes of the Novice Class license is to prepare, through actual operating experience, for the higher classes of licenses which require increased code proficiency.

H—Each new amateur station shall be systematically assigned a distinctive call sign to denote the licensee's class of operator license.

This is necessary in order for our monitoring facilities to immediately determine whether a particular licensee is operating within the range of his privileges and whether a licensee is subject to re-examination of his qualifications.

The following schedule will be used for assignment of station call signs. Presently assigned call signs will be changed upon renewal or modification of the station license to conform with this schedule:

(1) Amateur Extra Class—the single letter prefix "W" and a double letter suffix, provided that the licensee submits evidence of having held an amateur station license issued by the United States Government prior to July 1, 1932 (e.g. W2AB); a double letter prefix beginning with the letter "W" and a double letter suffix (e.g. WA2AB);**

(2)—Amateur First Class—the single letter prefix "K" and a double letter suffix, provided that the licensee submits evidence of having held an amateur station license issued by the United States Government prior to July 1, 1932 (e.g. K2AB); a double letter prefix beginning with the letter "K" and a double letter suffix (e.g. KA2AB);

**Consideration will also be given to the assignment of call signs having a two-letter prefix and a one-letter suffix (e.g., WA2B).

(3) General (Advanced) — a single letter prefix and a three letter suffix (e.g. W2ABC);

(4) Conditional—the double letter prefix "WC" or "WD" and a three letter suffix (e.g. WC2ABC);

(5) Technician—the double letter prefix "WT" or "WU" and a three letter suffix (e.g. WT2ABC);

(6) Novice—the prefix KN and a three letter suffix (e.g. KN2ABC);

(7) The call signs of General (Advanced), Conditional or Technician Class licensees who currently hold a station call sign which has a single letter prefix and a double letter suffix will not be changed solely because of failure to qualify for an Amateur First or Extra Class license.

(8) Stations located in Alaska, Hawaii, Puerto Rico, and in United States possessions under Commission jurisdiction will be assigned special double letter prefixes to show their specific locations followed by a double or triple letter suffix which will, where feasible, indicate the class of operator license.

I—Assignment of station call signs shall be in accordance with the foregoing schedule with only the following exceptions:

(1) A specific unassigned call sign may be reassigned to a previous holder thereof provided that it is appropriate to the class of operator license currently held by the station licensee;

(2) A specific unassigned call sign may be assigned to an amateur organization in memoriam to a deceased member and former holder thereof provided that it is appropriate to the class of operator licensee currently held by the station trustee;

(3 A specific unassigned call sign may be temporarily assigned to a station connected with an event, or events, of general public interest provided that it is appropriate to the class of operator license currently held by the station trustee or licensee.

7. It is the Commission's belief that these proposed amendments reflect a realistic solution to the need for an immediate and effective incentive licensing program in the Amateur Radio Service as advocated by most of the petitioners. To the extent that the particulars of any of the petitions involved are at variance with these proposals, they should be considered as having been denied. However, this does not preclude, and the Commission hereby encourages, the submission of new counter-suggestions for consideration. Comments are particularly invited as to: (1) the utility and interest in continuing the Amateur Extra Class of license in the light of the proposal to establish an Amateur First Class license and the possibility that the reserved frequencies associated with the Amateur Extra Class may not be fully occupied; (2) the width and the placement of the various reserved frequency segments for each class of license in each band.

8. These proposed amendments are issued pursuant to the authority contained in Section 4 (i) and 303 of the Communications Act of 1934, as amended.

9. Pursuant to applicable procedures set forth in Section 1.415 of the Commission's Rules, interested persons may file comments on or before July 15, 1965, and reply comments on or before July 30, 1965.

All relevant and timely comments will be considered by the Commission before final action is taken in this proceeding. In reaching its decision, the Commission may also take in account other relevant information before it, in addition to the specific comments invited by this Notice.

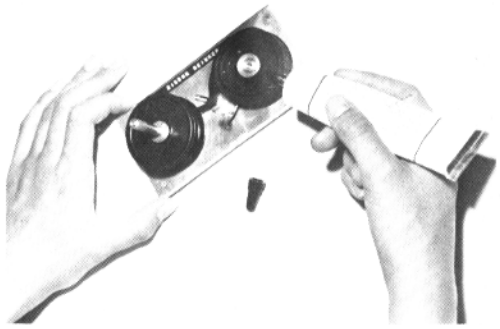
10. In accordance with Section 1.419 of the Commission's Rules and Regulations, an original and fourteen copies of all statements or comments shall be furnished the Commission.

FEDERAL COMMUNICATIONS COMMISSION
Ben F. Waple
Secretary

Attachment: Appendix
Adopted: March 31, 1965
Released: April 1, 1965

APPENDIX
Petitions Involved In This Proceeding

PETITION NO.	DATE FILED	PETITIONERS
378	Nov. 5, 1962	Chester L. Smith Bedford, Mass.
455	June 5, 1963	Roy R. Cone Chicago, Ill.
470	Aug. 9, 1963	W. A. May, Jr., Simon Kahn, Stanford G. Houghton, Stephen M. Newmark Los Angeles, Calif.
474	Aug. 26, 1963	Alex S. Labounsky Oyster Bay, N.Y.
480 and 481	Sept. 11, 1963	Ellen W. Ackerman Panama City, Fla.
499	Oct. 3, 1963	American Radio Relay League Newington, Ct.
516	Oct. 28, 1963	George H. Goldstone Bloomfield Hills, Mich.
517	Oct. 28, 1963	Lowell E. White Elmwood Park, Ill.
538	Nov. 22, 1963	Leland W. Aurick, George S. Gadbois Columbia, Penn.
577	March 3, 1964	Wayne Green Peterborough, N.H.



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In reading the Federal Register recently, ran across the following item. Patent number 3,175,780 issued to Walter E. Nettles (W7ARS), covering a ribbon reinking device. The patent carries three claims.

A photo is shown, below.

------O------

Don't forget the Alexander Volta RTTY DX Contest, May 22 thru 24. See April 1965 RTTY for details. Or write to SSB & RTTY Club, Post Office Box 144, Como, Italy for details and log sheets.

------O------

A VERSATILE INTERCONNECTIONS SYSTEM

INGEMAR JOHANSSON, SM6CSC
Rum 99, Gibraltargatan 82, Goteborg S, Sweden
OLOF LUNDBERG, SM6CKV
Klareborgsgatan 20, Goteborg V, Sweden

At the University of Technology in Gothenburg, we have several pieces of teleprinter gear in operation: a model 15 page printer, a model 14 typing reperforator and a model 14 transmitter-distributor. We soon realized that it was an unsatisfactory mode of operation to connect both printers in a series and both keyboards and the TD in series. We could not even prepare tapes when receiving the other fellow's transmission.

After some analysis of the problem, we noticed that we have four units sending teleprinter code:

1. The receiver terminal unit.
2. The model 15 keyboard.
3. The model 14 keyboard.
4. The model 14 transmitter-distributor.

Also we have three units receiving teleprinter code sent from above sending units:

1. The model 15 printer.
2. The model 14 typing reperforator, printer section.
3. The short-wave FSK transmitter.

We could find very few ways to connect a sending unit to a receiving unit that we could not find any use for. Therefore, we made this very flexible switchboard where we connected pushbutton SPST-switches in a matrix pattern for the different functions we wanted.

By pressing one of the pushbuttons any one of the sending units can be connected to any one of the receiving units.

However, at much QSO-operation a certain switchboard combination is often used. Therefore a multi-pole double-trow switch or relay is used to connect this pre-chosen combination.

We use the standard connection with the TX connected to the M15 keyboard and to the M14TD; the M14 reperforator connected to the M14 keyboard.

The M15 printer is connected to the TU while receiving and to the M15 keyboard and the M14TD while transmitting.

The latter switching is done by a DPDT switch which also gives a SPDT function for transmitter switching, receiver muting, antenna switching or whatever is wanted.

This particular pre-chosen combination will need a four-pole double-trow function at the above relay or switch.

Since the different units are not intended for the same sort of keyed signals (the TX-FSKeyer wants voltage plus or minus, the printer wants current on-off and the keyboard gives resistance low-high) we had to convert the inputs and outputs of the different units to a common switchboard network standard.

This is much easier than it sounds.

We use a parallel system of voltage keying with 0 volt for MARK and −50 volts for SPACE.

The terminal unit (the K6IBE TU-D from Jan/64) was furnished with a cathode follower output instead of the keyer tubes.

The keyboards and the TD were each equipped with a resistor and a diode and minus voltage.

If you want to, you can call the diodes a logic or-circuit. They are used to prevent the keyboards to short circuit each other when more than one keyboard is connected to the same receiving unit and one of them is supposed to give space.

From the switchboard the signals can go directly to the grids of the keyer tubes for each of the printers.

We leave it to the reader to make the system compatible to input of his FSK-transmitter.

At the station here a twin triode is used to supply a keyed plus-minus voltage for the FSK-er and to invert the polarity on some bands where the exciter would give upwards shift instead of downwards.

This switchboard system is very flexible as it allows for any interconnection combination that might be wanted.

It is easily extended for the operation of as many printers, transmitters and terminal units as is wanted.

Dear Merrill,

Olof, SM6CKV, and I came to think about the problem of interconnecting all the equipment used at our club station. It struck us that what we had seen of terminal units and such things was designed for a permanent combination of connections between the printers, TD, etc., or maybe for switching between two or three such permanent combinations. We felt we wouldn't be satisfied with that and you can see what were our conclusions on the next pages. SM6CKV assembled the switchboard and I put down some of our ideas on print.

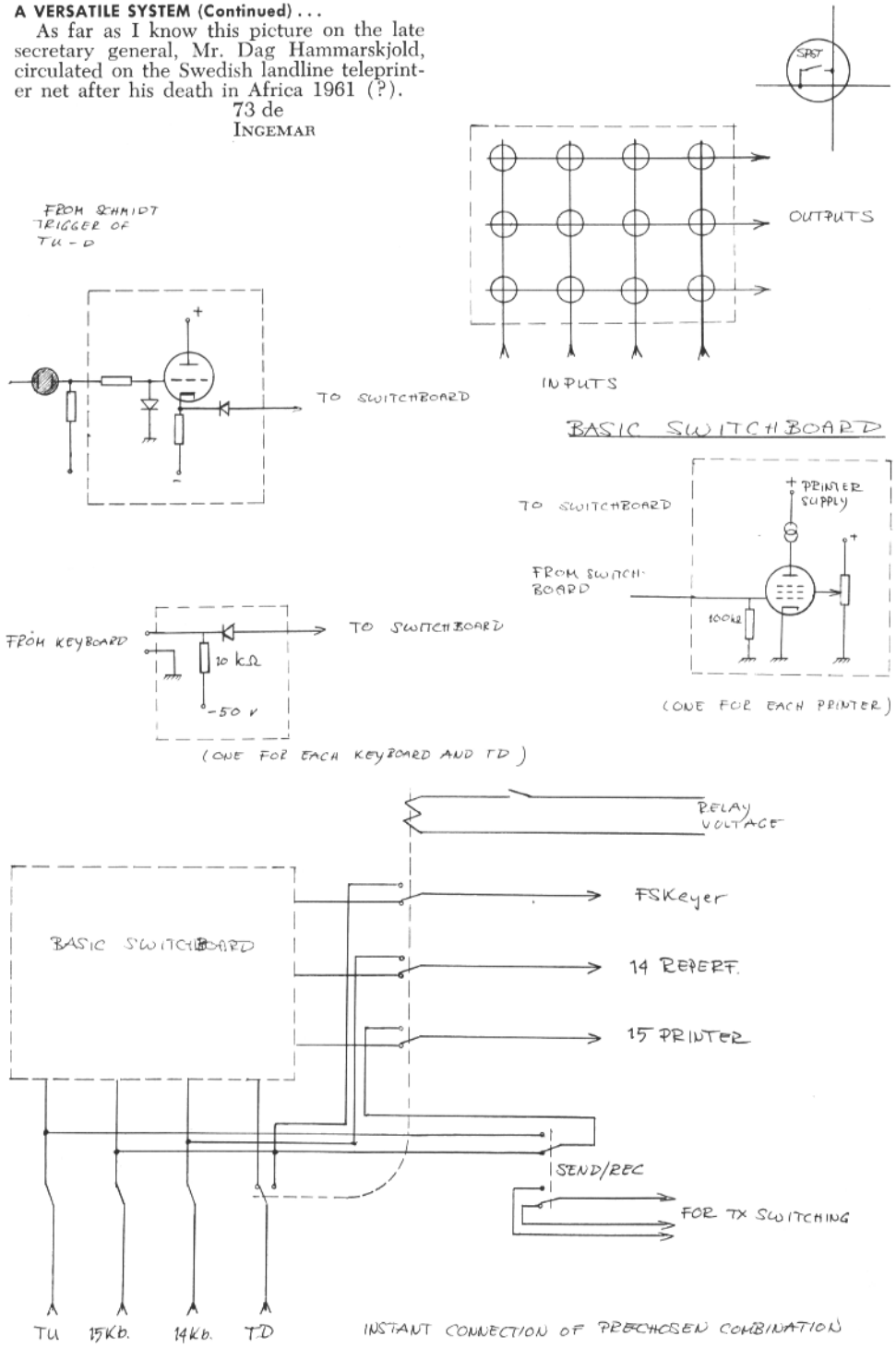
Feel free to put it in the dustbin when you have read it, but also feel free to put it into RTTY if you want to. In the latter case we ask you to make corrections on the language if necessary.

I also send you a tape designed for American printers (apostrophe on upper case J) with or without autoltrs-shift on space.

A VERSATILE SYSTEM (Continued) . . .

As far as I know this picture on the late secretary general, Mr. Dag Hammarskjold, circulated on the Swedish landline teleprinter net after his death in Africa 1961 (?).

73 de
INGEMAR



MORE DATA ON NORTHERN RADIO TYPE 152 CONVERTER

WILLIAM R. DEAL, K1CLD
Piermont, New Hampshire 03779

I am also enclosing a circuit for an 850 cycle shift unit for the Northern Radio type 152 converter. This info is taken from material sent me by the company — and as this unit is obsolete I can see no reason why it should not be passed on — they made no request to keep it to myself, anyway! I also add some information copied from the manual. I have more, should it prove of any interest.

If one is lucky enough to get these with their original frequency determining elements intact, I can see no reason why they wouldn't work on any shift by merely disconnecting the input band pass filter and using it, as is, on the (to us) peak frequency. I have two of the units and plan to try this, but, as with so many things, am way behind! The matter of stability might prove a problem — as they will shift with ±2 cps.!

From the manual —

"connection to a local teleprinter — (60 ma). It is recommended that an 1800 ohm, 10 watt resistor be connected in series with the load circuit.

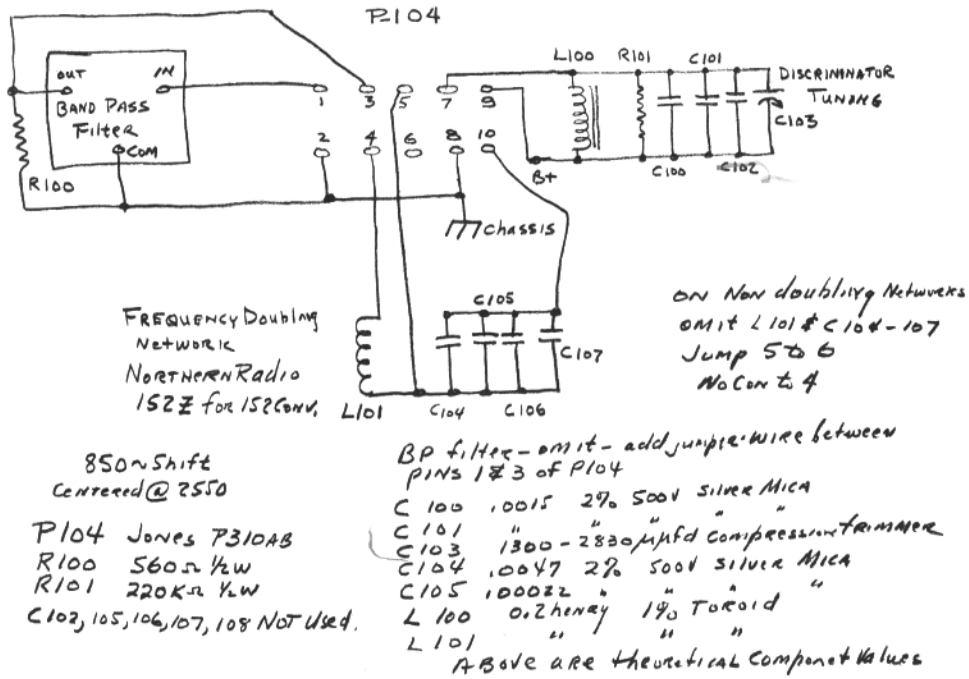
"If the printer coil is not protected by a suitable shunt, it is IMPERATIVE that a back e.m.f. shunt be paralleled across the printer coil — usually a series combination of 0.5 mf (600v) and 100 ohm 1 watt res. will be suitable.

"Tuning —

"Connect an audio osc. through a suitable 500 ohm attenuator pad to the tone input terminals of the converter. Connect a 2000 ohm, 10 watt res. across the output terminals of the converter. Adjust the level to the converter to approx. —15 VU. Set the oscillator to the desired center frequency. Adjust the disc. tuning cond. so that the current output meter starts oscillating between mark and space. This is the correct adjustment."

The diagram supplied shows the frequency doubling network — usually done on the lower audio freqs. L-101 and associated components are not used when doubling is not required.

Hope this info may be of some use to someone.



ARMED FORCES DAY COMMUNICATION TESTS ONCE A YEAR OPPORTUNITY

CW RECEIVING TIME

TIME	TRANSMITTING STATION	FREQUENCIES (KCS)
15 May 1965 160300 GMT (2200 EST)	WAR, NSS, AIR Army, Navy, Air Force Radio Stations, Wash, D.C.	3269, 3347, 3397.5 4015, 6970, 6992.5 7301, 13995, 14440 14405, 7315
160300 GMT 1900 PST	A6USA (Army Radio San Francisco, Calif.)	6997.5
	NPG (Navy Radio San Francisco)	3357,6999 7301.5

RTTY RECEIVING TIME

TIME	TRANSMITTING STATION	FREQUENCIES (KCS)
15 May 1965 160335 GMT (2235 EST)	WAR, NSS, AIR Army, Navy, Air Force Radio Stations, Wash, D.C.	3347, 3365, 4012.5 4560, 6992.5, 7315, 7380, 14405 14480
160335 GMT 2135 CST	A5USA (Army Radio Fort Sam Houston, Texas)	4025
160335 GMT 1935 PST	NPG (Navy Radio San Francisco, Calif)	4001.5, 7375 13547
160335 GMT 1935 PST	AG6EA (McClellan AFB California)	4580, 7332
160335 GMT 2135 CST	AG3HQ (Scott AFB Illinois)	4590, 7540
160335 GMT 1935 PST	A6USA (Army Radio San Francisco, California)	6997.5

SUBMISSION OF COMPETITION ENTRIES

Transcriptions should be submitted "as received." No attempt should be made to correct possible transmission errors.

Time, frequency and call sign of the station copied as well as the name, call sign (if any) and address of the individual submitting the entry must be indicated on the page containing the text. Each year a large number of perfect copies are received with insufficient information thereby precluding the issuance of a certificate. The name and/or call sign of the individual are mandatory if the certificate is to be awarded.

Competition entries should be submitted to the Armed Forces Day Contest, Room 5B960, the Pentagon, Washington, D. C. 20350 and postmarked not later than 31 May 1965.

EDITOR'S NOTE: RTTY'ers should make a special effort this year. We almost topped the CW group last year, in copy and contacts, and with a good try this year, we may be able to accomplish this worthwhile goal.

ALEXANDER VOLTA RTTY DX CONTEST

SSB & RTTY Club

BOX 144 — COMO (Italy)

The SSB & RTTY Club claims the first edition of the "ALEXANDER VOLTA RTTY DX CONTEST."

The contest will be entirely devoted to increase the interest of all the radio amateurs in RTTY, and in order to remember the italian discoverer of electricity Alexander Volta.

The rules you will find below are the same as in "ANNUAL WORLD-WIDE RTTY SWEEPSTAKES" from RTTY Society of Southern California, in order to permit a comparaison in two different season periods under the same rules.

A special prize to the winner will be offered from il RIF, Bruno. Certificates will be awarded to the top two winners in each country by SSB & RTTY Club.

1. TEST PERIOD:
0200 GMT May 22nd to 0200 GMT May 24th.

NEWS

Anyway as we are really working hard again for the Trans Pac race and will use RTTY and also SSB on Ham as well as 2704 Coast Guard both CW and Phone and also 2638 ship to ship. My vessel is the MANUAHI WEJA and we stand 24 hour watches around the clock for three weeks while the race is on. Have a staff of ops and they are f b having worked with me for years. This is the 14th race I have run radio for them. We expect about 70 or 75 yachts this year. Last race two years ago (they leave Wilmington, Cal., July 4th at noon), we had two hams aboard a couple of the racers and they did fine work.

Anyway let me know if you want some more and better pics . . .??

That was a honey of you an the XMAS ARRL. Very nice . . .

Oh yes, gear l to r . . . Model 15 and supply, model 52X Kleinschmidt and supply. NEW surplus CW rig ex Coast Guard, brand new from Pearl Harbor . . . (on top) TD. inside cabinet reperf (typing). This gear uses two 833A's in the final and will tune up on a short piece of wet string. Hi.

Oh yes, the TU is the Page Communications Eng. Co. property that I have had on loan for ten months. Works like beautiful. The TU is right under the TD.

Best Aloha,
Freeman KH6AX

------O------

Dear Gang:

To let you know all about my shack, I enclose a picture.

The room is especially for ham purposes only and is so well insulated against noise that it happened my wife was called by telephone and talked with hams hundreds of miles away and heard me over the line and did not know before I was home anyway . . .

The teletype gear is Lorenz Model 15 with both tapes for transmitting and receiving. It also has 2 speeds 45.45 and 50 bauds to be switched by a toggel, automatic carriage return with switching to the next line. On the table left hand a 2 meter rig for all modes of transmitting. On top of it a 13 tube converter. Further on the right (with lamp and SWR bridge on it) a linear. These 3 items are homebrew. Collins 75A-4 and 32S-1. A tapewriter follows which I use to write the answer while the printer still is working.

As antennas (inside the shack switches by gear on slant) I have two steel poles 250 feet apart. The one near my house with a height of 105 feet has 3 wide spaced beams for 20, 15 and 10 meters. On top of pole two 5 over 5 for 2 meters. The other one with a height of 85 feet is used for a zepp for 80 and 40 meters.

As I bought this estate I did not know it was so well suited for DX. It is on a hill the first highest elevation from seashore.

If any of RTTYers see Germany they are heartily invited. Sorry only I am 63 years old!

Best of 73's
Fritz Dresing, DL9EX

FRITZ DRESING, DL9EX

Op-945N/cak
Ser 46674P94
25 November 1964

From: Chief, Navy Military Affiliate Radio Systems (MARS)
To: Distribution List
Subj: Navy Military Affiliate Radio System (MARS)

1. On 2 January 1965 the Navy MARS Program will begin its third year of operations. Looking back over the past two years we have seen the program grow from a small nucleus of dedicated individuals to a total Navy MARS membership of nearly five thousand. This phenomenal growth has been accomplished despite the fact that our goal has been not to achieve an impressive numerical membership but rather to establish an efficient organization composed of proficient and reliable communicators ready to respond positively to U.S. Navy alternate communication requirements.

2. All members of Navy MARS should be proud of the program and its past accomplishments. All of us have experienced moments of disappointment but fortunately these have been more than offset by moments of gratification when Navy MARS members have responded to emergency or alternate communication requirements in an outstanding manner.

3. The strength of our program lies in the skill, dedication and pride of the volunteer members who unselfishly devote their time and proficiency in support of a military mission. Let us hope that we will not be called upon to use this potential in time of war, but in that event, we must be prepared to act in a well disciplined and procedurely correct manner on our circuits.

4. We can be proud of our program while not being satisfied. I ask you not to be satisfied but rather to seek improvement through constructive criticism offered within the proper framework of our existing organization. We have already proven that Navy MARS can get the job done. Now, it is our task to steadfastly work for the improvement and flexibility of our system in order to more effectively accomplish our assigned mission — that of providing alternate communications as an adjunct to normal naval communications.

5. Enclosures (1) through (4) are forwarded for information and/or appropriate action.

R. E. MICKLEY

LIST OF NAVY MARS DISTRICT DIRECTORS

Director, Third Navy MARS District
NØASI
Bldg. "RC", U.S. Naval Receiving Annex
U.S. Naval Base
Brooklyn, New York
Incumbent: Chief Radioman
C. J. Walker, Jr., USN
Area of Responsibility:
First and Third Naval Districts
Director, Fourth Navy MARS District
NØASD
Naval Supply Depot
5801 Tabor Road
Philadelphia, Pennsylvania
Incumbent: Chief Electronic Technician
Billy Gray, USNR
Area of Responsibility:
Fourth and Fifth Naval Districts; Potomac and Severn River Naval Commands
Director, Sixth Navy MARS District
NØASC
c/o U. S. Naval Reserve Training Center
U. S. Naval Base
Charleston, South Carolina
Incumbent: Senior Chief Radioman
Charles L. McKamey, USN
Area of Responsibility:
Sixth Naval District

Director, Eighth Navy MARS District
NØASF
c/o Eighth N. D. Master Control Radio Stn.
Lakeshore and Leroy Johnson Drives
New Orleans, Louisiana
Incumbent: Senior Chief Radioman
John L. Hines, USN
Area of Responsibility:
Eighth Naval District
Director, Ninth Navy MARS District
NØASG
Armed Forces Reserve Center
1721 McAree Road
Waukegan, Illinois
Incumbent: Senior Chief Radioman
Floyd Degraffenreid, USN
Area of Responsibility:
Ninth Naval District
Director, Tenth Navy MARS District
NØASJ
U. S. Naval Communications Station
Navy 116, Box 24
FPO, New York, N. Y.
Incumbent: Chief Radioman
Joseph F. Giunta, USN
Area of Responsibility:
Tenth Naval District
Director, Eleventh Navy MARS District
NØASE
Depot Special Services, Bldg. 340
MCRD
San Diego, California 92140
Incumbent: Master Chief Radioman
Henry C. Davis, USN
Area of Responsibility:
Eleventh Naval District
Director, Twelfth Navy MARS District
NØASH
c/o Twelfth Naval District Master Control Radio Station
Treasure Island
San Francisco, California
Incumbent: Chief Radioman
Dan Steen, USN
Area of Responsibility:
Twelfth, Thirteenth, Fourteenth, Seventeenth Naval Districts
Director, Fifteenth Navy MARS District
(acting) NØASP
1366A Headquarters Annex
Ft. Amador, Canal Zone
Incumbent: Chief Radioman
Charles Burge, USN
Area of Responsibility:
Fifteenth Naval District

NOTES:

1. Coordination responsibility for Navy MARS overseas and Maritime Mobile Operations rests with the Chief, Navy MARS.

2. It is anticipated that a Navy MARS District Director will be on board within the Thirteenth Naval District prior to 1 January 1965. He will be responsible for Navy MARS operations within the Seventeenth as well as the Thirteenth Naval District.

More on the SB-400

AL HUGHES, W1FGL
145 Pickney St., Boston, Mass. 02114

Read Bill Casmaer's article in the December issue on FSK for the SB-400 and I thot I might as well shoot along my scheme — which involves 1 pot and an insulated phono jack and nothing else. As Bill pointed out the LMO in the SB-400 has a built in diode shifting circuit (I don't think there is any varicap involved tho — looks like the old standard diode attached to a coil) so all you have to do is to change the bias voltage in a manner which will produce the desired frequency change. This is done by connecting a 150K linear pot in series with 150K ½ watt used as a rheostat across R154 which is a 680K resistor in the bias circuit. The pot is connected in series with the insulated output phono plug. When the keyboard or polar relay closes the resistance of R154 is reduced and the frequency of the LMO changes. You simply adjust the pot to produce the amount of shift you want. This will not upset the rest of the action of the SB-400 for a study of the schematic will indicate that on Lower side band R154 is shorted out by MS2F which produces a 2.8kc frequency shift. In my installation I glued the pot with epoxy cement with the shaft pointing straight up just in front of the printed circuit board. The leads (2—as you only use the movable arm and one end) go down thru a convenient grommet.

Note that the phono plug has to be insulated — I used a type which secures with a single nut. Put it in place of one of the "spares" on the back of the set.

There is only one objection to this system (there is always something!) — it produces reverse shift — i.e. the frequency goes down on Mark instead of up. Since I use a polar relay (horrors!) in a loop for keying, it means simply using the back contacts on the relay. When you are off RTTY and on SSB, simply pull the cord to the keying loop and the SB-400 is back to normal.

NEWS

I will try to make a small contribution to some issue of your RTTY bulletin. I computed values for audio filters several years ago when I had access to various inductances. I was interested in making filters with the same impedance for both mark and space channels. I will attempt to tabulate results in a usable form.

250 cps bandwidth						
Mark	(2125) R	9,952 L	88mh	C-1 .007552	C-2	.05686
Space	(2975)	9,770	44mh	.005447		.05991
350 cps bandwidth						
Mark	(2125)	7,085	88mh	.01064		.05441
Space	(2975)	6,967	44mh	.007775		.05802

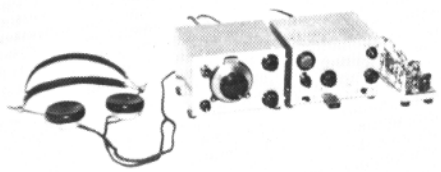
Values are for this configuration:

The filters should be terminated in the specified impedance if the calculated bandwidth is to be maintained ±10.%

Sincerely yours,
W7JLF
SAM P. CARROLL
4613 Opal Street
Olympia, Washington

——————O——————

Just a short note to let you know I will be on my way up north shortly. Am enclosing a photo of the QRP rig I am taking along. Listen in on the low end of twenty for me. Will be back on RTTY when I return. 73,
Will, WA6JZU



DX-RTTY

BUD SCHULTZ, W6CG
5226 N. Willmonte Avenue, Temple City, California 91780

Hi:

The first order of business this month is to clear up an "April Fool" gag that backfired. The photo on the cover of last month's issue of a QSL card from TA1AH which was made out to K3GIF was in reality a sample received in February. Actually TA1AH was on the air only during the BARTG Contest and Ed says he is receiving a lot of unwarranted congrats on his achievement. You can let him up now, fellers, and I promise not to horse around like that again! Speaking of the BARTG Contest – no official scores have crossed my desk as yet but all the rumors seem to indicate it was a tremendous success. Don, K8MYF, sent me a copy of his BARTG log and it is real drooling material. He worked 21 Countries and all six Continents and thumbing thru it I selected the following contacts as being typical of what he worked: DL6EQ, ON4HW, I1ORS, OZ8US, LX1DE, F8KI, SM6BJI, OE1KR, TA1AH, GM3ENJ and many more. Incidentally, I want to salute K8MYF for the putting together one of the neatest, most concise contest logs it has ever been the privilege of these tired old eyes to see. Merrill and I are trying to figure some way we can reproduce part of the log in "RTTY" so all of you can see what a beautiful job it is.

Lots of real good new ones are now showing upon FSK. Bob, WA6WGL, phoned in to report a good QSO with PZ1AX in Surinam. Bob reports that PZ1AX has a very strong signal on 14 Mcs. and was quite active around 0000 to 0200. Ed, K3GIF, also confirms this one and says his name is Bill Green and his QTH is Box 1842, Paramaribo. K3GIF also furnished the following scoop from the DX front – YS1RFE is a newcomer from San Salvador who turned up during the BARTG test. SM6CSC reports that the telegraph office will release a large number of printers to the SM hams during the next few days. He has been busy showing a group of SM hams how to assemble TU's, so look for a flood of Swedish RTTY activity very soon. Olle, SM5KV, has a fine RTTY signal although he runs 25 watts or less and only needs Oceania for WAC! K3GIF is now trying to arrange a sked for him with KH6AX so he can get his sixth and last continent. Ed also reports that TA1AH might have worked many more RTTY QSO's from Ankara if he hadn't had to contend with heavy CW QRM from Russian CW stations. Despite the CW QRM he managed 19 QSOs in several hours using a KWM-2 and a dipole antenna!

Just received the following last-minute items from K3GIF via WA6WGL – Jean, FG7XT, now has the light-weight portable printer he needed and can fly it in and out of the Caribbean Islands with ease and as I understand the situation he may now show up at any time from some of those hard-to-work Islands, so keep your beams in that direction so you don't miss a chance to work a rare one. Also in the same message Ed tells me that MP4BEK (Bahrein) has a strong signal and first showed up during the recent contest. This one should really make you hard-shelled DX Buffs get in there and fight. I recall I chased a Bahrein contact for four years on CW before I could pull it off – wonder how long it will take me to get it on RTTY? This is the sort of stuff DX dreams are made of! Guess I'll have to get that new tower up sooner than I expected.

Three well-known DX'ers all came up with the following predictions as to the winners of the recent BARTG contest: KP4AXM, FG7XT, KG4CG. These were their best guesses as to who would take the marbles judged on the basis of what they heard during the test. It will be most interesting to this editor if their predictions become a fact. The reason for this interest is that when the original rules for the World Wide Sweepstakes contest were concocted it was explained that the bonus system was devised to "level off" and any geographical advantage. At the time, the contest committee pointed out that a well-operated station in the South or Central American area could win the contest easily, thumbs down, because of the proximity to the many U.S.A. and Canadian contacts plus the advantage of being able to get into Europe, Africa, etc. for much longer periods of time. It will be interesting to see if the contest committee's arguments were valid or not. Whether there are changes in the rules for future contests will depend a great deal on the results of the BARTG test. We all owe the UK lads a vote of thanks for the excellent manner in which the contest and the publicity for it were handled and sincerely hope it will become an annual affair. When those lads put on a contest over there they certainly go all out!

Congratulations are in order this month to Sergio, I1AHN, and Don, K8MYF, for achieving their WAC-RTTY Awards. Sergio is Nr. 48 and Don received Nr. 49. Nice work!

Next column will be handled by my right arm, Ed Clammer, K3GIF, who has agreed to take over while I am away on a special

HORSE TRADES

FOR SALE: Exceptionally good model 15 with table, sync. motor, 80 point range, commercially rebuilt, guaranteed for $125.00. Model 28 RO page printer, base—no cover for rack mounting. Excellent condition, $115.00. CV57, need minor work, operates, $50.00. W6TNS, Box 7388, Alta Loma, Calif.

FOR SALE: 51J3, $400.00. CV89A converter, $170.00. W3LST, 228 Plummer, Oil City, Pa.

WANTED: More NFSK (170 or 350 cps.) Operations on RTTY frequencies. RTTY, INC.

WANTED: Model 15, contact G143456, as for Larry, 368 Grenola, Pacific Palisades, California 90272.

FOR SALE: Kleinschmidt TT-100 page printer with keyboard, has 60 wpm and 100 wpm gears, sync. motor, auto CR/LF, unshift on space (easily disabled if desired) built in loop supply, copy lights, technical manual. Above features all original mfg. equipment, excellent condx., $325.00 FOB. Set of four 8x10 photographs of prototype TT-L converter clearly showing optimum layout of components, $3.50 PP, W8SDZ, 4626 Rambo Lane, Toledo, Ohio 43623.

FOR SALE: Model 28 RO base, $15.00. Model 28 comm. kybd., $50.00. Model 28 typing unit with comm. type box, $30.00. Model 28 LRXB3 combination TD and typing reperf, with two 60-75-100 speed gearshifts. LRXB3 has tape reel and used tape takeup reel, $150. Model 28 60-75-100 speed gearshift for the Model 28 table top reperf, $7.50. Wanted: Will pay up to $250 for a PERFECT 28ASR cabinet, must be complete, no junk. Need ASR motor 1/12th HP. Jerry Murphy, 2547 18th Avenue, San Francisco, Calif. 94116.

FOR SALE: Collins 32V-2 in mint condition, $160 or will trade for model 28 KSR or ASR. WANTED: One paper crank for model 15 printer. Also need keyboard for same. K0GXL, 5732 Ovid Avenue, Des Moines, Iowa 50310.

WANTED: Urgently wanted TG-7B page printers, any condition. Also need CH-60 and 52 shipping cases for TG-7. Columbia Electronics, 4365 West Pico Blvd., Los Angeles, California 90019.

SWAP: Send me 50 keytops and get a set, communications only. New-new, used-used. Trade set of New TR gears for a 15 pinion, 14 gear or pinion, 60 sync. Wanted sync. motor fans, 15 bases and covers and 28 components. Sent SASE for list. W4NYF, 405 N.W. 30th Terrace, Ft. Lauderdale, Florida 33311.

FOR SALE: One model 19 complete except cover, new keyboard, $225.00. One model CV-57-URR with 50 KC and 455 KC input arrangements, $100.00. Both for $275.00. W8DFA, 17th & Eoff Streets, Wheeling, W. Va., Phone 304-232-2326.

FOR SALE: Model 15, sync. 60 wpm, $75.00. Model 28ASR, no cover with keyboard, 60 wpm sync., communications type, $200.00. RTTY test tape, $2.00 PP. Plays at 3.75 ips for 15 mins., standard tones. 88 mhy toroids. 50c each, 5/$2.00. K5BQA, 11040 Creekmere, Dallas, Texas 75218.

NOTICE: RTTY, INC., no longer has past issues of RTTY available. Sorry the supply has been mailed. Thanks.

FOR SALE: RTTY ribbon reinker, $3.00. W7ARS, 8355 Tanque Verde Road, Route 2, Box 694 R, Tucson, Arizona 85715.

WANTED: Times Corp. Seafax Model RRG in usable condition. W7JFU, c/o V. Potter, P. O. Box 574, Ranier, Oregon.

FOR SALE: Model 28KSR console type like new, $200. Model 15 just refinished, $75. Both machines operating. W9ECC, 851 Crestview Dr., West Bend, Wisc.

DX-RTTY (Continued) . . .

mission. It should be a refreshing change from all the cliches I have been pouring on you for the past months. Thanks for your interest. See you all in a couple of months.

73
Bud, W6CG

STOP THE PRESSES!

Just as this was about to go to the printer a letter and a copy of the BARTG Contest log arrived from Jean, FG7XT. He garnered over 42 thousand points! The DX in his log is something to behold. Jean also mentions in an accompanying letter that in 18 months of RTTY operation he has worked more than 500 different stations in 25 countries and five continents. His list includes 42 of the 50 States. It is a wonderful record and certainly deserves a salute from the DX gang. Jean is anxious for a six meter RTTY contact with the States, so starting May 1st he will call and listen every day between 1900Z to 1930Z on this band for some RTTY-FSK.

Goteborg 11 March 1965

NOTICE—RENEWALS AND SUBSCRIPTIONS ACCEPTED THROUGH DECEMBER 1965 ONLY

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W6AEE, Editor W6CG, DX Editor