RTTY

Jean F8KI

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NEWS OF AMATEUR RTTY

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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.

Before the

FEDERAL COMMUNICATIONS COMMISSION
Washington D.C. 20554

In the Matter of
Amendment of Section 97.87(a)(2)
of the Rules governing the Amateur
Radio Service to delete a
"dual identification" requirement
for teleprinter stations

S
FCC 64-593
53139

DOCKET NO. 15267
RM-358
RM-435

REPORT AND ORDER

By the Commission: Commissioner Cox dissenting.

1. On January 10, 1964, the Commission released a Notice of Proposed Rule Making to amend Section 97.87(a)(2) of its Rules governing the Amateur Radio Service to delete the requirement that a teleprinter station transmit by telegraphy or telephony the call sign of the station to which it is transmitting. This Notice was duly published in the Federal Register, January 15, 1964 (29 FR 354), and all comments filed in response thereto have been considered by the Commission.

2. All comments received, including those of the original petitioners, the American Radio Relay League and Mr. Edwin B. Breuning, supported the proposal. Qualified support was received from a few licenses who felt that greater relaxation of the teleprinter station identification requirements should be accomplished. In this regard, the Commission notes, as was expressed in its Notice of Proposed Rule Making, that any further relaxation of these requirements at this time would be detrimental to its monitoring and enforcement activities.

3. In addition to comments as to the proposed rule change, the Commission solicited comments and suggestions as to methods of superimposing telegraphic identification of the transmitting station upon the carrier without interrupting the teleprinter transmission. One suggestion in this respect was submitted by Mr. Merrill L. Swan (W6AEE), President of the RTTY, Inc., as follows:

"Using an audio frequency shift generator, and a keyed audio generator, feeding a SSB type of transmitter, I have demonstrated the compatibility of this method. The audio tones employed were: Mark, 2125 cycles, Space, 2975 cycles and CW, 2550 cycles. A sharp cut-off 'low-pass filter' was used between the AFSK/cw generator and the . . . transmitter, utilizing LSB Mode. The transmitted signal was examined, using a panadaptor and a . . . receiver, to search for spurious signals—none were found."

Mr. Swan's method appears to have limited application but apparently can be accomplished without change of the Rules. However, amateur licensees contemplating the use

of audio tones via single side band suppressed carrier transmitters for the generation of A1 and/or F1 emissions are cautioned that any radiation of the carrier or suppressed side band frequencies at an intensity sufficient to cause interference in receiving equipment of good engineering design constitutes spurious radiation in violation of Section 97.73.

The Commission will continue to consider these suggestions and our monitoring stations would be pleased to cooperate by observing tests of methods under development.

4. As indicated, there is no apparent objection to the proposed rule amendment. Therefore, for the reasons set forth herein and in its Notice, the Commission concludes that the proposed rule-making should be adopted. In adopting this rule-making one important factor requires comment. This rule change will enable licensees to employ automatic devices for telegraphic station identification by International Morse code. However, the transmission of the amateur call sign automatically at more than twenty or twenty-five words per minute and/or with a frequency shift of less than about 100 cycles would make identification difficult, especially when monitoring from a mobile unit. Licensees are advised, therefore, that for telegraphic identification they will be expected to observe reasonable standards for code speed and keying methods. In the event that there are abuses in this area, the Commission will be obliged to set forth standards in the Rules.

5. Authority for the amendment set forth in the attached Appendix is contained in Sections 4(i) and 303 of the Communications Act of 1934, as amended.

Therefore, IT IS ORDERED, this 1st day of July, 1964, that Section 97.87(a)(2) of the Commission's Rules is amended as set forth in the Appendix attached hereto, effective August 10, 1964.

FEDERAL COMMUNICATIONS COMMISSION
Ben F. Wape, Secretary

Attachment: Appendix
Released: July 7, 1964

NOTE: Rules changes herein will be covered in T.S. VI(64)-1.

FOURTH ANNUAL WORLD - WIDE RTTY SWEEPSTAKES

THIS IS A COMPETITION BETWEEN ALL STATIONS THROUGHOUT THE WORLD TO DETERMINE THEIR ABILITY TO EXCHANGE MESSAGES VIA TWO-WAY RADIO TELEPRINTER.

1. TEST PERIOD:
   0200 GMT Oct. 17th to 0200 GMT Oct. 19th, 1964.

2. BANDS:
   This test will be conducted in the 3.5, 7.0, 14.0, 21.0, and 28.0 MCS amateur bands.

3. Stations may not be contacted more than once on any one band. Additional contacts may be made with the same station if a different band is used. In the interest of encouraging multi-band DX operation, the same country may be claimed more than once if contacted on different bands. The same state worked on more than one band may be claimed only once.

4. COUNTRY STATUS:
   For the purpose of this contest KH6, KL7 and VO will be considered as separate countries in addition to the ARRL country list.

5. STATIONS WILL EXCHANGE MESSAGES CONSISTING OF:
   (A) Message Number.
   (B) Check (RST).
   (C) Time in GMT.
   (D) State or Foreign Country.

6. POINTS:
   (A) All two-way RTTY contacts by North and South American countries including KH6 will earn two points.
   (B) All two-way RTTY contacts by countries other than in (A) above will receive ten points.
   (C) All stations receive 200 points per country worked not including their own.

7. SCORING:
   (Includes All Stations)
   (A) Two-way exchange points times total states worked.
   (B) Total country points per band times number of continents worked.
   (C) Add Item (A) and (B) above. This is your total test score.

8. SAMPLE SCORE SHEET:

   (A) EXCHANGE POINTS............(196)....TIMES STATES........(40)....EQUALS............(7,840)

   (B) COUNTRY POINTS............(800)....TIMES CONTINENTS....(3)....EQUALS........(2,400)

   (C) ADD ITEM (A) AND (B) ABOVE....................(10,240)

   TOTAL TEST SCORE...............

9. SAMPLE LOG:

STATION LOG OF......W6TPJ......(CALL) DATE......17, OCT. 1964

		SENT					RECEIVED		
NR	RST	TIME	BAND	STATION	NR	RST	TIME	STATE OR COUNTRY	PTS.
1	589	0205	14	W6CG	2	589	0204	CALIFORNIA	2
2	569	0230	14	VK3KF	6	579	0231	AUSTRALIA	2
3	?	?	14	W6NRM	4	359	0240	---	0
4	599	0300	14	W2JAV	7	599	0259	NEW JERSEY	2
5	579	0514	7	VK3KF	22	569	0514	AUSTRALIA	2

TOTAL EXCHANGE POINTS (8) STATES (2) COUNTRIES (2) CONTINENTS (2)

STATION LOG OF......VK3KF...... DATE......17 OCT. 1964

		SENT					RECEIVED		
NR	RST	TIME	BAND	STATION	NR	RST	TIME	STATE OR COUNTRY	PTS.
1	599	0201	21	ZL3HJ	1	599	0202	NEW ZEALAND	10
2	589	0204	21	W6CG	1	569	0205	CALIFORNIA	10
3	589	0210	21	W6NRM	3	569	0210	---	10
4	569	0220	14	W6AEE	2	569	0222	---	10
5	579	0224	14	VE7KX	3	589	0225	CANADA	10

TOTAL EXCHANGE POINTS (50) STATES (1) COUNTRIES (3) CONTINENTS (2)

NOTE: Log the state only once, the first time contacted. Log the country on each band contacted. (See sample log; Paragraph 9)

10. Logs and Score Sheets should be received by RTTY, Inc., 372 Warren Way, Arcadia, California 91007, by November 27, 1964 to qualify.

THE WA4GTA TD

Roy W. Dancy, WA4GTA
112 Marlboro Road
Portsmouth, Virginia

Gather around all you who have stepper relays in your junk box that you don't know what to do with. Being a lazy type and a lover of gadgets I put mine and one that I bummed to use. Enough excuses and now to what it does.

The basic idea is a stepper relay that steps in unison with the commutator of a TD. Each information segment of the commutator is in series with a wiper arm of the relay. When a contact that the wiper is resting on is wired in there will be a mark on the line. The relay has ten poles and 26 positions allowing it to hold 52 characters in stowage. It is not necessary to store the start space or the stop mark.

S1 is a microswitch mounted under the base of the TD. The arm that advances the tape closes S1 opens as the rotor comes to the stop segment. S1 opens as the rotor comes to the start segment. The stepper needs this much time to operate.

Most continuously rotating stepper relays have a counter drum on the side of the rotor. This drum is modified to perform the other control functions. The following description is for the TTY memory since the CW memory operates the same.

The counter dial of RY2 has a notch cut in the edge and SW2 is mounted so that its arm falls in the notch when RY2 is in the resting position. SW2 being in series with the coil of RY2 will allow RY2 to make one complete revolution and come to a stop. SW3, in parallel with SW2, starts the sequence of operations. SW3 can be either a pushbutton or a toggle switch depending on whether one or more than one revolution of RY2 is desired.

A cam, made of half of a large washer, is mounted inside the counter dial and SW4 is operated by this cam. After the rotor of RY2 has made half a turn SW4 closes and operates RY4. This selects the other side of RY2 doubling the stowage capacity of the unit.

RY6 has its contacts in parallel with the torn tape switch of the TD. RY6 then starts the TD when SW3 is operated and stops the TD when the sequence of operations is over.

The character that the relay stops on must be a letters function to complete the circuit and allow the TD to be used as a regular TD. Timing makes it necessary that the first character be a letters also as the relay will step once when SW3 is pushed.

The only difference in the CW relay, RY5, is it operates only on bauds ONE and FIVE as per the November '63 issue of RTTY. It must stop on a wired in set of contacts also. It should be wired in from the back to prevent extra dots from being sent. It is OK to have ONE marking if the last character in your call ends in a dash. RY5 was added in hopes that the FCC will drop the dual ID. The four pole 20 position relay is just big enough to hold DE WA4GTA.

All of the relays should operate on the same voltage to save extra wires and voltage sources.

The next time that you hear a CQ from WA4GTA it ain't no tape! Good luck and don't go blind wiring in the relays.

CONTACT DIAGRAM — X INDICATES CONTACT MAY OR MAY NOT BE CONNECTED.

COIL DIAGRAM
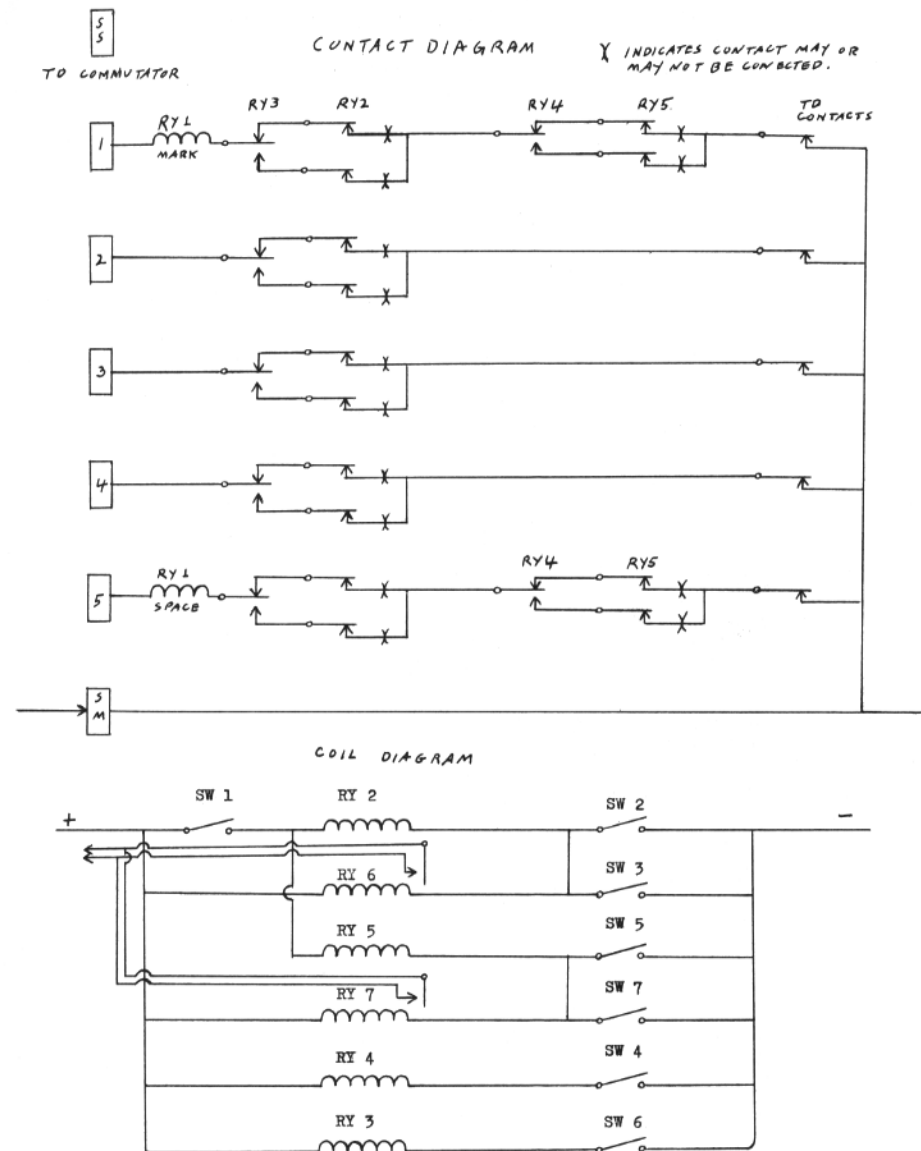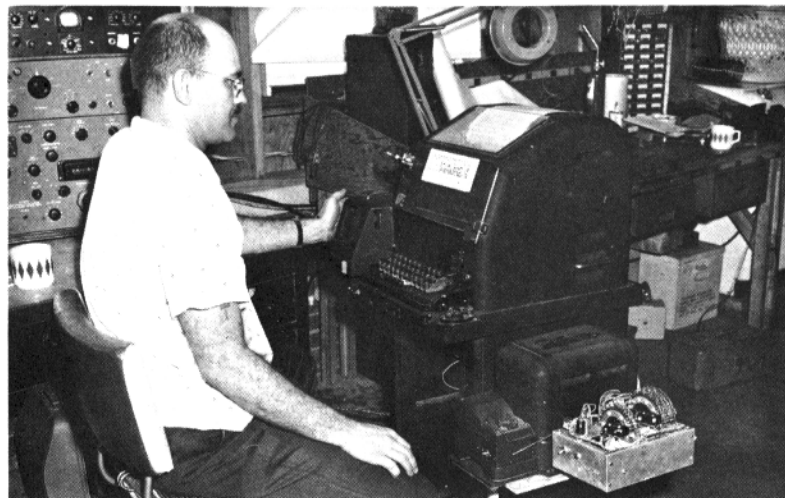
RY 1	CW key as per the november issue of RTTY.
RY 2	26 position 10 pole stepper relay- holds TTY information.
RY 3	Selects side of RY 2.
RY 4	Selects side of RY 5.
RY 5	20 position 4 pole stepper relay- holds CW information.
RY 6	Starts TD for TTY send.
RY 7	Starts TD for CW send.

SW 1	Drives both steppers. Micro switch.
SW 2	Stops RY 2. Microswitch.
SW 3	Starts RY 2. Normally open pushbutton or toggle switch.
SW 4	Operates RY 4. Micro switch.
SW 5	Stops RY 5. Micro switch.
SW 6	Operates RY 3. Micro switch.
SW 7	Starts RY 5. Normally open pushbutton switch.
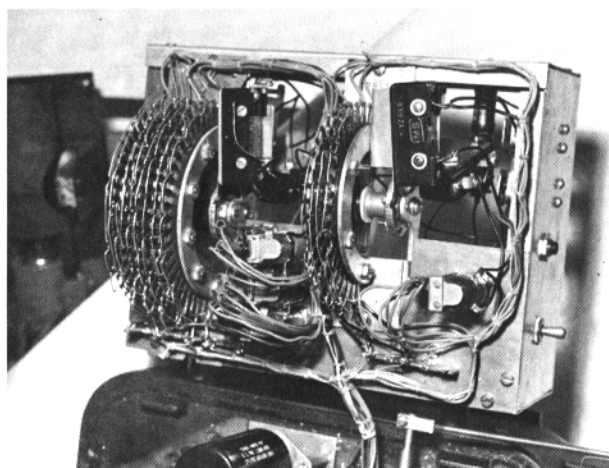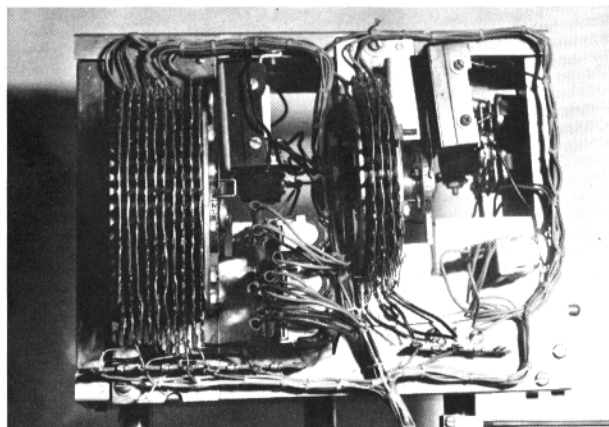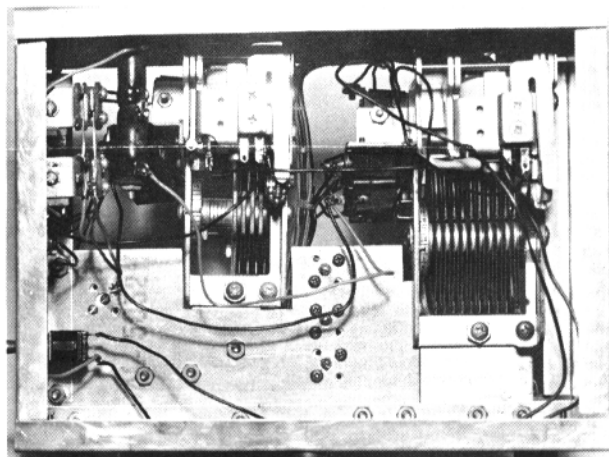
K4NAA GOES PORTABLE FOR ANNUAL AFCEA SHOW

The Navy's own "Ham" station, K4NAA, the Washington, D.C. voice of the Chief, Navy Mars, operated fixed portable from the lobby of the Sheraton-Park Hotel on May 19, 20 and 21. The occasion was the 18th Annual Convention of the Armed Forces Communications-Electronics Association (AFCEA).

Setting up an operating amateur station in a hotel the size of the Sheraton-Park poses a few problems—especially when no building alterations may be attempted and cables must be completely hidden so as not to mar the appearance of a luxurious lobby or present a hazard to thousands of guests. Erecting the necessary antennas and wiring appropriate lead-ins is an adventure in itself.

The operating booth was designed for utility, eye appeal, and ease of assembly. Three operating positions were planned for single sideband voice and CW operations. Contacts were limited to the 10, 15, 20, 40, and 80 meter bands, requiring three antennas. An all-band vertical antenna, a triband beam antenna mounted on a 20 foot tower section, and a 40 meter dipole antenna were attached to heavy wooden pallets and hoisted to the hotel roof. Guy-wired securely, they stood without any other attachment.

The antenna leads were dropped down a new elevator shaft, still under construction, to the lobby floor level, then through a small opening in a wall into the rear of the exhibit.

Relatively good circuit conditions existed throughout the convention. Slightly more than 300 contacts were established with amateurs in Germany, England, Puerto Rico, Santo Domingo, the Canal Zone, Paraguay, Ecuador, Colombia, Costa Rica, Mexico, Venezuela, Salvador, the Dominican Republic, and Guantanamo Bay, Cuba, as well as virtually every section of the United States.

Navy, Marine, Army, and Air Force licensed operators manned the station daily, passed messages for convention delegates and answered questions from the many visitors who crowded around the operating exhibit.

It was a real pleasure to demonstrate once again the Navy's association with AFCEA and the Amateur Radio Fraternity, and the Navy looks forward to further opportunities of this nature.

## K9POU

Vernon G. Schroeder
522 Park St.
Batavia, Ill.

Enclosed is a picture of my "shack." From the top down the gear is as follows:

Johnson 6N2 Converter
Globe Highbander Xmitter
Speaker
W2JAV TU and AFSK OSC.
Homebrew TU (Modified Electrocom CCT)
RTTY Loop and Control CCT Panel
Patch Panel
FCC-3 TU
Input Filter and Tuning Ind.
Collins 51J-3 RCUR
100V Xmitter
Transistorized AFSK OSC
Station Control Panel and SWR Meter
I plan to build one of those new "TWO TONE" TU's but can't decide which one. I have the circuit on DW, K8DKC's TU-H which seems to be the latest but he says he is working on a new one which sounds interesting so maybe I'll wait and build it.

73,
Vern, K9POU
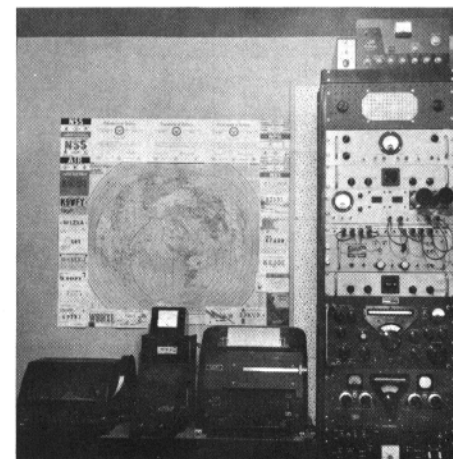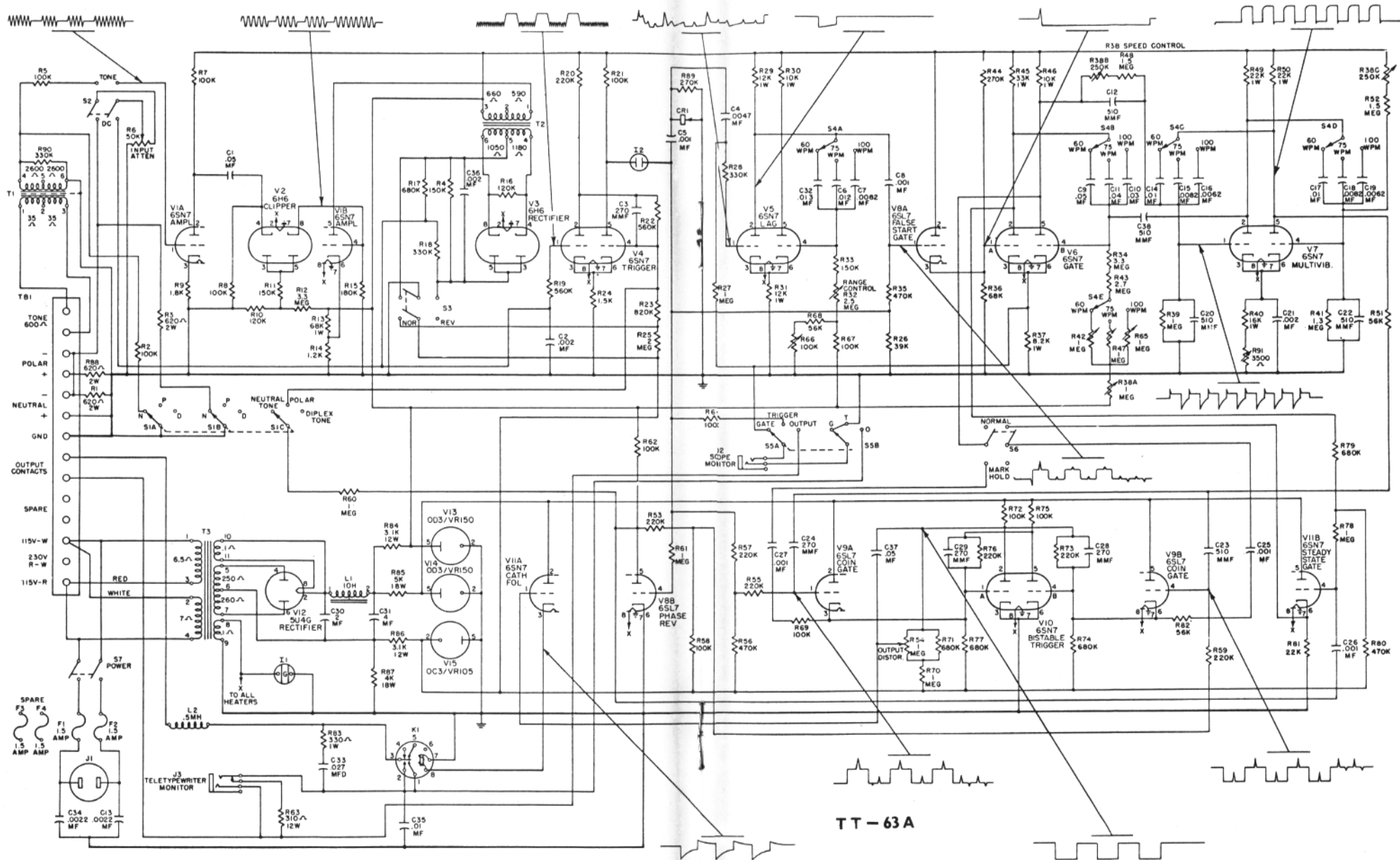
TT-63A

RTTY, Inc.
Arcadia, California

Gentlemen:

On that fine day when I finally completed my version of the Twin-City TU I confidently plugged it in and hooked it up and tried it. WOW! The worst case of polar relay hash I had ever heard. An hour later, and much more shielding, but not much better. This is when I hit upon the simple circuit that follows for eliminating the polar relay. It is almost exactly the same as the output circuit of the WZJAV converter, but with one minor change.

The two 6SN7 cathodes are cut loose as shown by the X's (Fig. 1) and the following circuit (Fig. 2) is put in its place.

S1 is the reversing switch, and R3 controls the loop current. R1 and R2 are 180 ohms each. As in most circuits, J1 *must* be insulated from the chassis. Also, the polar relay may be left in the circuit or it can be replaced by a Z80 ohm resistor.

This circuit increases very much, in my opinion, the versatility of the Twin-City TU, already one of the easiest TU's to get goin.

73,
Dave Knight, WA2YSH
1576 Van Allen Road
Wyoming, New York

FIG 1.

FIG 2.
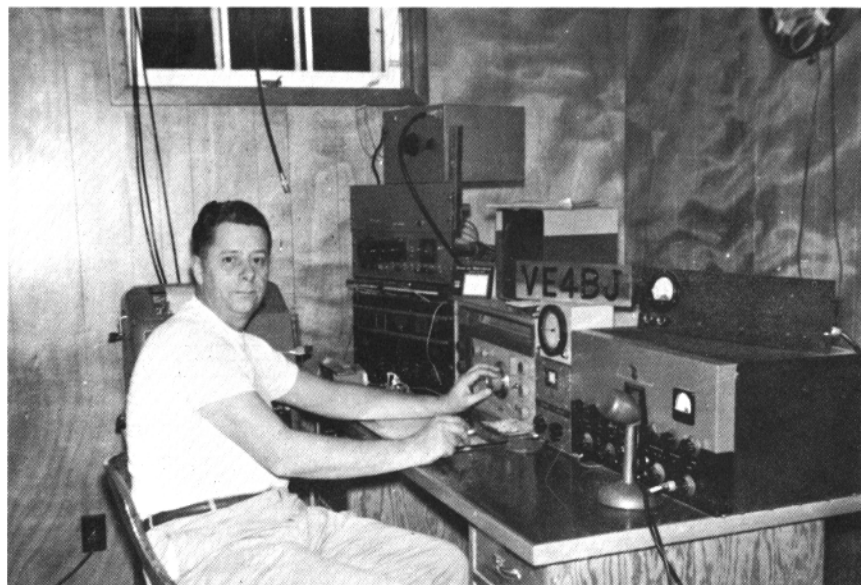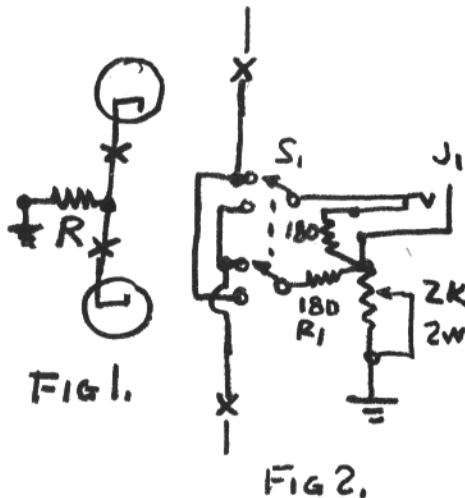
VE4BJ

THE NEW ASA STANDARD CODE

Fred Hatfield K8VDU
2918 Langfield Drive
Columbus 13, Ohio

The RTTY enthusiast cannot help but become involved in some portions of data processing equipment and data transmission. Invariably he runs across literature and/or equipment involving Teletypesetter, Fieldata, Binary-Coded Decimal, etc. If he is employed in an allied field he will eventually dig into these things and discover that our great technological advantage of "standardization" is woefully inadequate. He will also discover that what experience RTTY has ·given him only verifies the fact that his method of data transmission is not very efficient!

Mr. Baudot had never considered the fact that someday our information handling problems would become as acute as they are. In his time, the fact that five channels of information only gave 2^5 or 32 unique combinations presented no problem — he simply reserved a code to shift into upper case and got enough to finish the numerics, punctuation and machine functions.

When automatic data processing and computers came into view, punched paper tape looked to be promising as a data input/output medium. Tab cards also were used but a great deal of interface equipment was involved to make the two compatible.

Teletypesetter came along too—but it takes many more control functions and characters to run an automatic typesetter. This problem was solved by simply adding another channel to the standard 5. Indeed, if you will examine the Teletypesetter code you will find that in most cases the 6th channel is just a shift signal.

As more computers and data processing equipment came along, new codes were devised that seemed to be more applicable for the intended use. An article in *Communications of the ACM*, Dec. 1960, pp. 638-642 lists almost 70 distinct codes!

A few years ago, the American Standards Association decided that if data handling systems were to be expanded it would be logical to expend some effort toward standardizing an interchange code, allowing all these different equipments to be able to communicate with each other.

After a little thought, it will become apparent that a new code could lead to many problems. Two of the uppermost entail the modification of existing equipment and getting an agreement as to what the standard code will be.

The American Standards Association formed a committee of leading equipment manufac-

turers and data communications experts to work on the problem. The result of this effort was a suggested code that would compromise most of the needs of all concerned. F16 is an illustration of the new Data Interchange Code.

When AT&T decided that this was the way to go, they came up with the new model 33 and 35 Teletypes. This equipment represents quite an investment in the sense of capital and the future of data communications.

Now a few words about the code itself. Basically it is a 7 bit code with the 8th channel reserved for parity. The code is "contiguous" which is a fancy way of saying that the binary values of the graphics (A-Z, 0-9, etc.) are sequential. As an example, if binary values 1-2-4-8-16 are assigned to channels 1, 2, 3, 4 and 5 respectively, the letter A carries a binary value of 1, B carries a binary value of 2, and so forth up to Z which carries a binary value of 26. This is an important feature when it comes to sorting information for it should be evident that a listing of data in binary value sequence would automatically make it alphabetized.

The printing characters (graphics) are assigned to those portions of the code that have channels 6 and 7 opposing, i.e., with 6 marking and 7 spacing or vice-versa. Where 6 and 7 are alike, both marking or both spacing, the signals are assigned to machine functions. Notice that many areas are still open for assignment.

CONTROL CHARACTERS

Some of the possibilities within the code are quite ingenious and open a tremendous field of investigation and possibility. A few of the control codes are listed below along with some of their functions:

WRU: Who are you—A special signal allowing activation of an "answer back" mechanism. This will allow verification of contact with an unattended machine.

SO, SI: Shift Out, Shift In—Special codes allowing a shift between upper case and lower case alphabets.

S_0-S_7: Information separators—Allows retransmission of selected blocks of characters. For example, "repeat transmission back to S_2," would mean searching the previous transmission back to the S_2 code and retransmitting it.

ALT MODE: Alternate mode — Allows transmission of NON-ASA codes without interference of normal ASA functions of the printer.

ESC: Escape—Allows different meanings to

American Standard Code for
Information Interchange

1. Scope

This coded character set is to be used for the general interchange of information among information processing systems, communication systems, and associated equipment.

2. Standard Code

b7						0	0	0	0	1	1	1	1
	b6					0	0	1	1	0	0	1	1
		b5				0	1	0	1	0	1	0	1
b4	b3	b2	b1										
0	0	0	0			NULL	DC0	♭	0	@	P	↑	U
0	0	0	1			SOM	DC1	!	1	A	Q		N
0	0	1	0			EOA	DC2	"	2	B	R		A
0	0	1	1			EOM	DC3	#	3	C	S		S
0	1	0	0			EOT	DC4 (STOP)	$	4	D	T	U	S
0	1	0	1			WRU	ERR	%	5	E	U	N	I
0	1	1	0			RU	SYNC	&	6	F	V	A	G
0	1	1	1			BELL	LEM	' (APOS)	7	G	W	S	N
1	0	0	0			FE0	S0	(	8	H	X	S	E
1	0	0	1			HT / SK	S1	)	9	I	Y	I	D
1	0	1	0			LF	S2	*	:	J	Z	G	
1	0	1	1			VTAB	S3	+	;	K	[	N	
1	1	0	0			FF	S4	(COMMA)	<	L	\	E	ACK
1	1	0	1			CR	S5	−	=	M	]	D	①
1	1	1	0			SO	S6	.	>	N	↑		ESC
1	1	1	1			SI	S7	/	?	O	←		DEL

3. Positional Order and Notation

Standard 7-bit set code positional order and notation are shown below with b_7 the high-order, and b_1 the low-order, bit position.

$$b_7 \quad b_6 \quad b_5 \quad b_4 \quad b_3 \quad b_2 \quad b_1$$

EXAMPLE: The code for "R" is: 1 0 1 0 0 1 0

4. Legend

NULL	Null/Idle	DC1-DC3	Device control
SOM	Start of message	DC4(Stop)	Device control (stop)
EOA	End of address	ERR	Error

X3.4
6

Legend Continued

EOM	End of message			
EOT	End of transmission	SYNC	Synchronous idle
WRU	"Who are you?"	LEM	Logical end of media
RU	"Are you . . .?"	S_0-S_7	Separator (information)
BELL	Audible signal	ƀ	Word separator (space, normally non-printing)
FE0	Format effector		
HT	Horizontal tabulation	<	Less than
SK	Skip (punched card)	>	Greater than
LF	Line feed	↑	Up arrow (Exponentiation)
VTAB	Vertical tabulation	←	Left arrow (Implies/ Replaced by)
FF	Form feed		
CR	Carriage return		Reverse slant
SO	Shift out	ACK	Acknowledge
SI	Shift in	①	Unassigned control
DC0	Device control reserved for data link escape	ESC	Escape
		DEL	Delete/Idle

NOTE: Expanded definitions of some of the above terms may be found in the appendixes.

5. Qualifications

5.1 This standard does not define the means by which the coded set is to be recorded in any physical medium. The standard code does not include any redundancy or define techniques for error control. Further, it does not specify a standard collating sequence.

5.2 Deviations from the standard may create serious difficulties in information interchange and should be used only with full cognizance of the parties involved.

5.3 Unassigned codes are reserved for future standardization. Their use in information interchange prior to such standardization is a deviation from the standard.

5.4 The appendixes to this standard cover code design considerations and criteria, related subsets, extensions and deviations.

THE NEW ASA STANDARD CODE (continued) . . .

be assigned to the codes. For example, "escape" followed by another unique combination could mean that everything following is 5 level Baudot, or any previously determined assignment.

IMPLEMENTATION

ASA coded equipment is beginning to appear in the field now and will hopefully constitute the major portion of data processing facilities in the future. Not to mention the fact that it may make 5 level equipment easier to obtain because of obsolescence!

DX - RTTY

Bud Schultz, W6CG
5226 Willmonte Ave.
Temple City, Calif. 91780

Howdy DX'ers:

If you notice any smudges or grease spots on this page it's because I carried my typewriter and the mail bag out onto the patio this afternoon and I am trying to take care of this chore while I keep my eye on a turkey which is slowly revolving on the barbecue. Hmmm—that reminds me—I should order a new rotator for my beam. Well, enough of such levity—let's get down to business!

Here's the latest scoop from the desk of my good right hand—Ed Clammer, K3GIF: He reports that DL3IR has worked both KA5MC and KA9MF recently. Ed remarks that apparently Joel is back at KA5MC and without wishing him any bad luck it would be great if he could stick around there until a few more fellers could get their Asian contact for WAC-RTTY. YV5AVW was in Washington recently to visit K3GIF and then went on to visit the World's Fair. By the time this gets into print he should be back and operating in Caracas. DL1IN is a new one from Cuxhaven and is reported by W6AEE as putting a fine signal into the West Coast—and that ain't easy in the summertime! His name is Hans and he is about to go into the hospital for treatment of a serious disease he has fought for a long time. QSL cards from those who have worked Hans would be mighty welcome to him during the coming weeks. Even if you haven't worked him—why not send a note or a "get well" card? I can vouch for the fact that it is a wonderful feeling to hear from the gang at a time of great personal crisis. K3GIF also says that Wilf, ON4HW, is back on RTTY as the first licensed FSK station in a country where RTTY was first licensed on July 8. His first "legal" QSO was with FG7XT followed by Rene at DL3IR. Wilf is anxious to spend a lot of time DXing on twenty and will be looking for all his old friends.

Vern, K9POU, writes that he received a long awaited QSL from Dale (ex KZ5DS) and Dale says that he is leaving for Taiwan on August first and hopes to be on RTTY from BV1USC. This should be a real shot in the arm for those who are chasing new countries. Vern modestly reports that he hasn't worked much DX but did manage to work FG7XT and F9RY/FC and copied LA8LF during the past two weeks! K9POU also wants to know the best time to work the KA stations in Japan. I suggest the best chance to hook those lads is between 0200 and 0500 GMT around 14,090 KCS.

F9OE sent a fine photo of Jean, F8KI, and says that K3PI and F8KR are also active on RTTY now. F5AN sent in a money order for a subscription and writes that he is in the process of building up his RTTY gear. It begins to look like France is suddenly becoming very active along with the Scandinavian countries. With all this European activity coming along the next Sweepstakes Contest in October should keep all you DXers busier than a cranberry merchant! By the way—better brush up on the rules—I think the Boss Editor is running them in this same issue. While speaking of the Boss I am reminded that he tells me that YV5AFA is moving into a new location in a penthouse 150 feet high with a sixty foot pole that rotates and supports a six element, twenty meter Telerex beam. Shades of I1RIF!! —and if that isn't enough—he has a complete Collins S line with a thunderbolt linear!! (That last item makes me want to go back in my shack and tear all my gear out by the roots!)

Here's a nice long letter from Arthur, G2FUD, that is just bursting with news. Arthur says that BARTG membership continues to increase at a slow but steady pace and TTY gear continues to pop up in the most unexpected places. Arthur says that there are 55 Danish stations with RTTY gear now as compared to only three at this same time last year. He tells us that Ib, OZ8US, managed to find a 14 TD and is having a ball running tapes to his heart's content. I sure hope Ib will run a tape of the Sweepstakes rules so that a lot of those OZ boys will show up for the contest this year.

Activity from down under is still holding up and our regular skeds with Eric at VK3KF and Bruce, ZL1WB, are very long and solid print. During one schedule with VK3KF this past month Charles, VK4RQ, broke in with a tremendous signal to announce his return to the active list. Earlier that same day Eric had made a QSO with VK2EG so he was pleased to announce a red-letter day in Aussie RTTY history; all active VK typers had finally been in operation on the same day!! Bruce is still fighting TVI and gets off the band about 0500 to insure good neighborhood relations. This is pretty tough on him—especially when all his Stateside buddies are still banging in. Also just received a nice note from Henry, ZS1FD, down Capetown way. Henry and his wife, Ruth, just returned from a trip to Europe. It will be good to hear his fine sig-

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nals on the band once again. Thanks a lot for your letter, Henry, it was really appreciated.

Well, fellers, these few lines have taken me most of the afternoon and my barbecued turkey is getting to the critical stage so guess I had better sign off and take care of the situation before I have to push the panic button. See you all here next month and for gosh sakes start making plans now for that World Wide Sweepstakes in October. We need every one of you so please talk it up!

Cheers 73
Bud W6CG

Ed Note: Our cover photograph of Jean, F8KI was sent in by Claude, F9OE.

F.C.C.— REPORT AND ORDER (Continued) ...

Appendix

Part 97 of the Commission's Rules is amended as follows:

§97.87(a)(2) is amended to read as follows:

§97.87 Transmission of Call Signs.

(a) * * *

(2) The required identification shall be transmitted on the frequency or frequencies being employed at the time and, in accordance with the type of emission authorized thereon, shall be by either telegraphy using the International More Code, or telephony, except that, when a method of communication other than telegraphy using the International Morse Code or telephony is being used or attempted, the required identification shall be transmitted by that method and only the call sign of the transmitting station need be transmitted either by telegraphy using the International Morse Code or by telephony.