

SECOND 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.

SWEEPSTAKES RULES

- Test period:
0200 GMT Oct. 20th to 0200 GMT Oct. 22nd, 1962.
- Bands:
This test will be conducted in the 3.5, 7.0, 14.0, 21.0 and 28.0 MCS. Amateur Bands.
- 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 only be claimed once.
- Country Status:
For the purpose of this contest, KH6, KL7 and VO will be considered separate countries in addition to the ARRL country list.
- Stations will exchange messages consisting of:
 - Message Number
 - Check (RST)
 - Time in GMT
 - State or foreign country
- Points:
 - All two-way RTTY contacts by North and South American countries including KH6 will earn two points.
 - All two-way RTTY contacts by countries other than in (A) above will receive ten points.
 - All stations receive 200 points per country worked not including their own.
- Scoring:

INCLUDES ALL STATIONS

- Two-way exchange points times total states worked.
- Total country points per band times number of continents worked.
- Add item (A) and (B) above. (This is your total test score.)

8. Sample score sheet:	(196)	(40)	(7,840)
(A) Exchange points.....times states.....equals.....			
(B) Country points.....times continents.....equals.....	(800)	(3)	(2,400)
(C) Add (A) and (B) above.....			(10,240)
			(Total Test Score)

9. Sample Log:

Station Log of..... W6TPJ.....(Call)					Date..... 20, Oct. 1962.....				
SENT					RECEIVED				
NR	RST	TIME	BAND	STATION	NR	RST	TIME	STATE OR COUNTRY	EXCHANGE POINTS
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.....(Call)					Date..... 20, Oct. 1962.....				
SENT					RECEIVED				
NR	RST	TIME	BAND	STATION	NR	RST	TIME	STATE OR COUNTRY	EXCHANGE POINTS
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	9	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 the first time contacted on each band. (See Sample Log Para. 9.)
10. Logs and score sheet should be received by RTTY, Inc., 372 West Warren Way, Arcadia, California by December 1, 1962 to qualify.

THE RECEIVER FOR RTTY

Irvin M. Hoff, K8DKC
1733 West Huron River Drive
Ann Arbor, Michigan

(EDITOR'S NOTE: This is the second in a continuing series designed to assist the newcomer to RTTY in selection of equipment that will produce good results; and for the person who as yet is not on RTTY but needs information in order to get started.)

The typical amateur radioteletype station consists principally of the Teleprinter; receiver; transmitter; TU or converter to change audio tones from the receiver into electrical impulses for the teleprinter; and an antenna system.

As such, good selection of a satisfactory receiver is quite important. There are several excellent receivers on the market that should fit the requirements nicely, and we will attempt in this article to mention a few of those that should give outstanding results on RTTY. Subsequent articles will deal with the transmitter; FSK; the converter; and later on operating methods, switching systems for convenient operation, etc.

On RTTY, perhaps the most important consideration for satisfactory operation from the receiver should be its stability. Certainly one of the most stable is the Drake receiver—factory figures quoting less than 100 cps after warm-up. One of the most annoying things to happen in any RTTY station is a receiver that won't sit still, especially as one uses the higher frequencies of 10, 15 and 20 meters, where a majority of the activity is to be found during the summer months.

It was perhaps Collins who pioneered in making receivers with crystal-controlled first oscillator stages for the military. Since this time, Collins has become well-noted for two things in particular—very accurate dial readings, and very stable receivers. Perhaps it was with Collins that the "drop-test" first produced satisfactory results. This is where you can knock on the receiver or actually drop it a short distance and have it remain on frequency. Of course this is an extreme, but does point up the rugged features of any receiver if it can pass this "drop-test".

Since the advent of SSB, ultra-stable receivers have become a must. RTTY users have profited by the attempts of receiver manufacturers to provide the stability that is necessary on SSB. As a result, several good receivers now can easily compete with Collins with regards to stability. A few of these will be mentioned later in the article.

It might be assumed that any moderately-expensive receiver these days should have sufficient sensitivity (ability to pull in weak

stations—here the "signal-to-noise" ratio is frequently mentioned) for reception of the modern powerful station with beam antennas, etc. Therefore we shall not concern ourselves with sensitivity.

The other item which is quite important when selecting a receiver to do good work on RTTY is selectivity. This is a statement telling how broad a portion of the band a receiver will pick up. For AM, it used to be typical to have about six kilocycle band width, so most receivers designed for AM reception will still have a position of perhaps 5-6 kc., or space to put a special filter of that bandwidth.

For SSB, about half that band-width is necessary, so it is not unusual to find 3.1 filters in older SSB equipment, and perhaps 2.7, 2.4, or most recently 2.1 in the newer receivers for SSB. Collins used to sell 1500 cycle filters to amateurs specializing in DX work on SSB, and a number of RTTYers have found these to be ideal for RTTY. Don Wiggins has shown in previous articles in fact, that a 1200 cycle bandwidth would be ideal for the standard 850 cycle shift.

However, all these filters are made for voice communications. If we take a moment to dream, it would be nice to have a filter in the IF of the receiver that would not be flat clear across that entire 1200 cycles, but perhaps flat for the first and last 400 cycles with no response at all in the middle 400. This would tend to eliminate the cw stations, etc., who manage to get in the middle of the mark and space tones. These stations can materially ruin a RTTY conversation, even though we have special filter types back in the converter.

So back to receivers for RTTY, again. SSB has given us another beautiful feature of benefit to the RTTY man—namely a product detector. Only the latest receivers made for SSB have these as a rule. Among other things, they enable one to keep the AVC turned on at all times, which assists greatly in cases of severe fade, etc. The SX-88 (1956) Hallcrafters had AVC on CW, and only the 75A4 Collins and later offered product detectors. Other recent brands have added this item. It is certainly useful and anyone buying a new receiver for use on RTTY should make an attempt to get a unit offering it.

Many of the pioneers in RTTY are quite enthusiastic about narrow shift. Certainly it has many advantages such as using less

space, and offering greater protection against selective fading. It also should make more effective methods of combating cw interference. With the proposed 170 cycle shift, you no longer need or desire such broad selectivity as our previous 1200 cycle or greater requirement. Now one should expect ideal results with a 500 cycle filter—assuming that it will not “ring”, and self-oscillate. It should not take long to visualize the inherent advantages of using a 500 cycle filter. This should reject nearly all interfering signals, and provide much better copy a majority of the time.

Thus any receiver intended for RTTY should adapt easily to the new narrow-shift proposal. Narrow shift will be singled out for a separate article in the future, but let us state that no doubt it is the coming thing and that perhaps in a few years 850 cycle will not be in use. Thus in our list of receivers, we must allow for good work on narrow shift.

So with the information we have presented, we can now make this summarization of desired qualities for best RTTY work:

1. Extreme stability—
2. Selectivity good for 850 and narrow shift—
3. Product detector—

There are of course other things of importance, but many of these become personal preference and should be left to the taste of the buyer. Such as size, weight, convenience of controls, accuracy, accessories such as notch filters, “Q”-multipliers, etc.

Regarding item 1: The most stable receiver would perhaps be one that had a oven-controlled crystal oscillator. This would be plausible under certain conditions, and in fact is in use at many commercial stations where no drift can be tolerated.

At any rate, it can best be achieved by a crystal-controlled first oscillator where the mixer system in the modern superheteodyne receiver need not be multiplied as you go from band to band. The same degree of stability can be realized on 10m with this type of receiver as on the lower frequencies.

On item 2, then we would like a unit offering 1200 cycle bandwidth for the 850 cycle FSK. Anything more broad than 1200 cycle is merely allowing extraneous interference to bother the AVC system and it must be later filtered out in the converter. Most new receivers have a 2.1 selectivity, which is quite good.

For the narrow shift, then a 500 cycle selectivity position is ideal, and many receivers offer this.

Most recent SSB receivers offer the product detector, although only the SX-115 and SX 101A in the Hallicrafters line offer this item.

We can now proceed to recommend several makes of receivers in different price

ranges that should give very good results. All these will comply with item 1, by having crystal-controlled first oscillators:

Hallicrafters SX-115. A new amateur-band-only receiver now on the market with crystal controlled first oscillator. Very stable, and has excellent selectivity with both 2.0 and 500 cycles offered. Large, heavy unit, quite expensive.

Hallicrafters SX-117. Just announced, a lower priced version of the SX-115. Specifications appear to say that this is a good stable receiver, in a compact package, with 12 tubes. This may turn out to be a satisfactory receiver.

Collins 75S-3. This unit offers fine stability; excellent dial calibration; has a 2.1 filter and has the ability of tuning the 2.1 off to one side to pick up the standard tones of 2125 and 2975. However, it only has a 200 cycle filter for CW which may be unsatisfactory for narrow shift. This receiver is very convenient to use, and quite light weight.

For 850 cycle shift, the tones of 2125 and 2985 were chosen for general work, as they are the 5th and 7th harmonics of 425, which is the mid-point of 850 cycles. By using the 3rd and 5th instead, we now get tones of 1275 and 2125. These tones work quite well.

The “S”-line comes with no CW filter, although a position is offered for a 500 cycle mechanical filter. This in conjunction with an additional crystal is available at extra expense. For RTTY, a different crystal is necessary to place the position of the filter in the midst of the two audio tones required for the converter. In this case, the converter may be set for any two tones desired, and a proper crystal may be purchased.

Collins “S”-line other than 75S3—no provision on the 75S1, 75S2, or kwm-2 is offered to change the position of the BFO such as in most other receivers. Thus the position of the filters is fixed. It is therefore impossible to pick up the standard tones of 2125 and 2975 without elaborate modification of the receiver. However, it is usually a simple job to instead change the tones the converter will receive—so the converter is designed to accept instead the tones of 1275 and 2125. This works quite well, and turns those receivers into excellent units.

Collins 75A4: These receivers have been superceded by the “S”-line, but have been made in limited numbers in Canada. A few new ones are still available occasionally. An excellent unit for RTTY use. Accepts three plugin filters—1500 cycle and 800 cycle commonly available. 3.1 usually comes standard. A 500 cycle filter is also obtainable, but somewhat expensive. The

receiver is very expensive and quite large. Most units were very stable, but improved stability may be required for narrow shift FSK in areas of poor line-voltage regulation. This can be achieved by regulating PTO filament voltage.

Drake Receivers: The entire line of Drake Receivers have all had excellent stability from the moment they were first introduced. Designed primarily for SSB, they have done an excellent job on RTTY and CW as well. They have “pass-band tuning”, whereby the IF can be moved to accommodate standard tones of 2125 and 2975 with no modification. Early units had selectivity of 2.4 which is getting somewhat broad for best results. Later models have 2.1 which is comparable with the best obtainable; together with a 500 cycle position that gives excellent results on narrow shift. Very compact, and moderate cost. All in all, the best buy of any receiver for the dollar spent with regards to RTTY. (Also considered the equivalent of the best for CW as well as for SSB—a most remarkable offering.) (W6NRM July 1962 RTTY.)

We cannot in these few pages do justification to the many receivers on the market. Even though they do not have crystal-controlled first oscillators, there are many receivers in current use by Hammarlund (the HQ-170 seems to be quite satisfactory to many owners on RTTY); Hallicrafters; National; Gonset and TMC that give surely good service.

However, this article is being written with the idea of mentioning a few that give outstanding performance. It is not our intention to evaluate the many receivers being sold today, but to mention a typical receiver in several price ranges.

The next article will deal with selection of a transmitter for RTTY.

CHICAGO AREA TELEPRINTER SOCIETY

The officers of the CATS invite you to attend the eighth annual “CHI-RTTY” meeting on 7 October 1962. The meeting is held on the Sunday preceeding the National Electronics Conference to allow those who are attending the Conference to also attend the meeting.

The meeting will be held this year at McCormick Place, 23rd Street and Lake Shore Drive. The room will be open from 1000 for registration, rag chewing and informal equipment demonstration. The technical session will begin at 1400 and run until 1700. As usual, there will be no registration or other fees for attendance at the meeting. The only expense will be for each individual's own food and refreshments. The usual evening dinner meeting will be held at a nearby

restaurant. Price of this dinner will be \$4.50 and advance reservations are requested. Send reservations and checks to:

Ray Morrison, W9GRW
8029 Keeler Ave.
Skokie, Illinois

The main attendance prize, to be awarded to one of those attending the dinner, is a MODEL 28 printer. Attendance at the dinner is necessary to be eligible for this prize. Numerous other prizes will be awarded at the conclusion of the afternoon technical session.

Anyone interested in presenting a short paper on a subject of interest to amateur RTTY'ers is invited to submit the title of their paper for inclusion in the meeting program.

George, W9SPT
Ray, W9GRW

EIGHTH ANNUAL “CHI-RTTY” MEETING PROGRAM

1000	Registration and delivery of dinner tickets
1000-1200	Equipment Displays Model 29 and 32 Teletype Machines. Electrocom Terminal Unit and Tone Keyer. 600 WPM Teletype Tape Equipment. Specialized RTTY Test Equipment.
1200-1300	Lunch
1330-1400	Explanation of model 29 and 32 Teletypewriter Machines. Ray Morrison, W9GRW.
1400-1600	Technical Papers “Measurements in the RTTY Station” — Dave Chapman—W9DPY “Tone Telegraphy in MTWX Service” — Robert Paculat — W9JBT “Use of SSB Transmitters in RTTY Operation” — Burt Jaffe—K9BRL
1600-1630	Floor Discussion of RTTY Subjects
1630-1700	Attendance Awards
1830-2030	Dinner and Dinner Attendance Award

RTTY: I have been called on the carpet today by one of the RTTYers STOP They say that none of these transistor oscillators will oscillate STOP That arrow on the transistor is on the wrong symbol making the collector and the emitter switched STOP Sorry the error, which was compounded by using another's diagram. SGD HENRY, W4MGT.

PAØAA

The writer spent this summer's vacation in Holland, which besides being a very pleasant country to holiday in, also provided the opportunity to visit PAØFB, Jan Adama, once again and to visit for the first time, PAØAA, the HQ station of the Dutch Amateur Radio organization, VERON.

For the past three years, a regular weekly RTTY sked has been held between PAØFB and G2UK on 80 metres and these have been most reliable and usually given 100% copy. As a result, a very firm friendship has been established between Jan and the writer, and it was indeed good to meet him once again in person. In fact the whole vacation in Holland was made that much more pleasurable through Jan's help and comradeship.

PAØAA has of course, become of particular interest to European RTTY-ers because of the weekly RTTY News Bulletin they radiate as part of their transmission service. This includes a news bulletin in Dutch and English on both phone and CW, CW proficiency tests and CW practice transmissions. At present these are radiated on both 80 and 2 metres, but the service may be extended to 20 metres in due course.

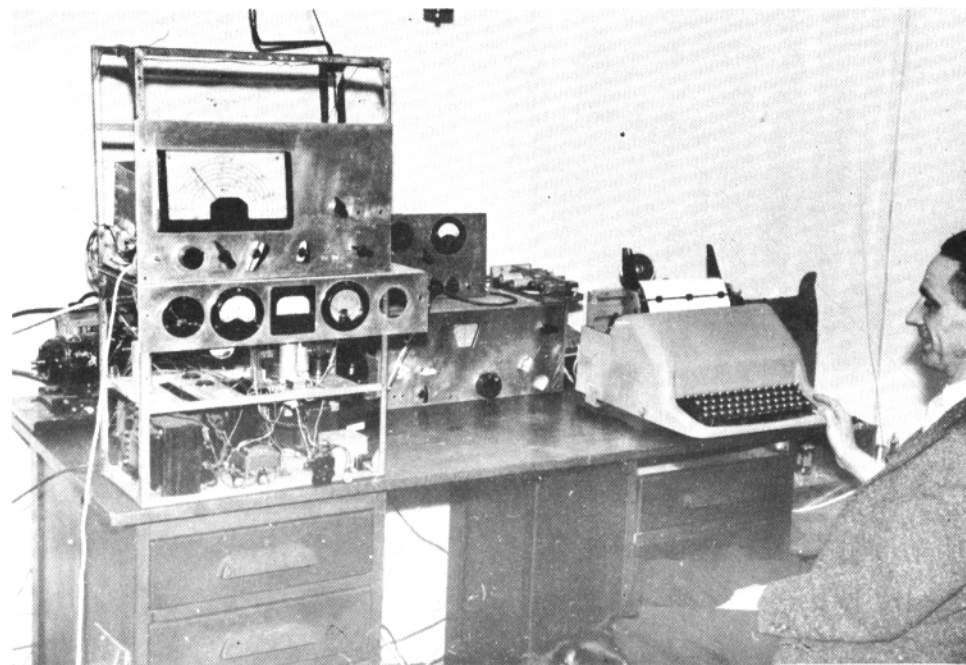
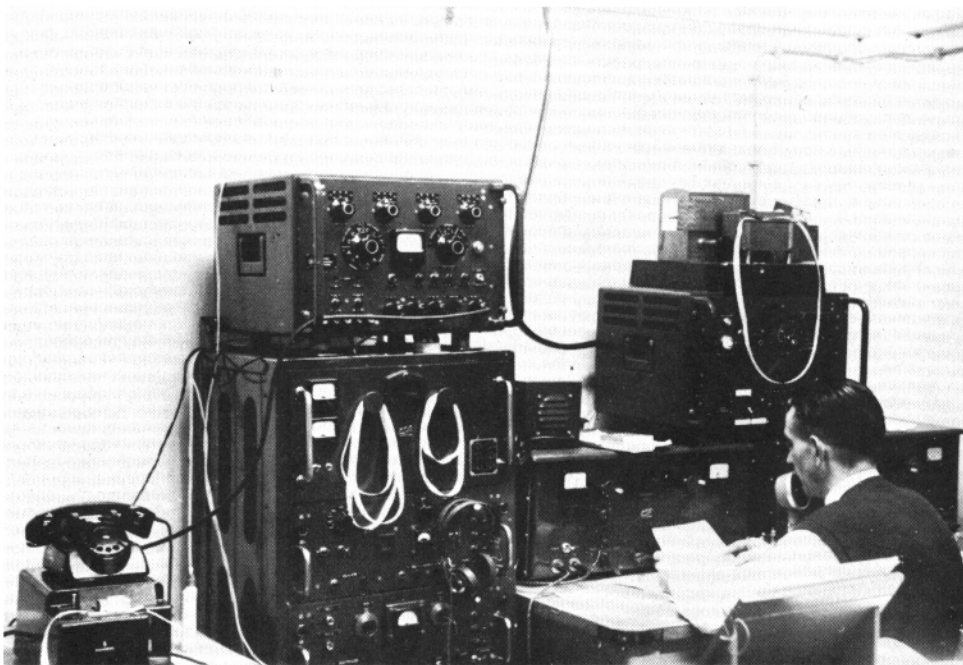
The recent addition of RTTY to this service has been a great stimulus to this mode of amateur communication in Europe and credit for its establishment must go to Pete

van Weerlee, PAØYZ, who is the 1st Operator at PAØAA and who also has his own RTTY station at his home in Leiden. PAØAA is located at a factory owned by, the Sikkens Group of paint manufacturers through the generosity of the management. It is situated a few miles from Leiden. From the two metre activity aspect, the location is ideal, as the station is on the top floor of a multi-story tower. Transmission on 80 metres is also good, but reception on this band is made difficult at times by static from nearby power lines.

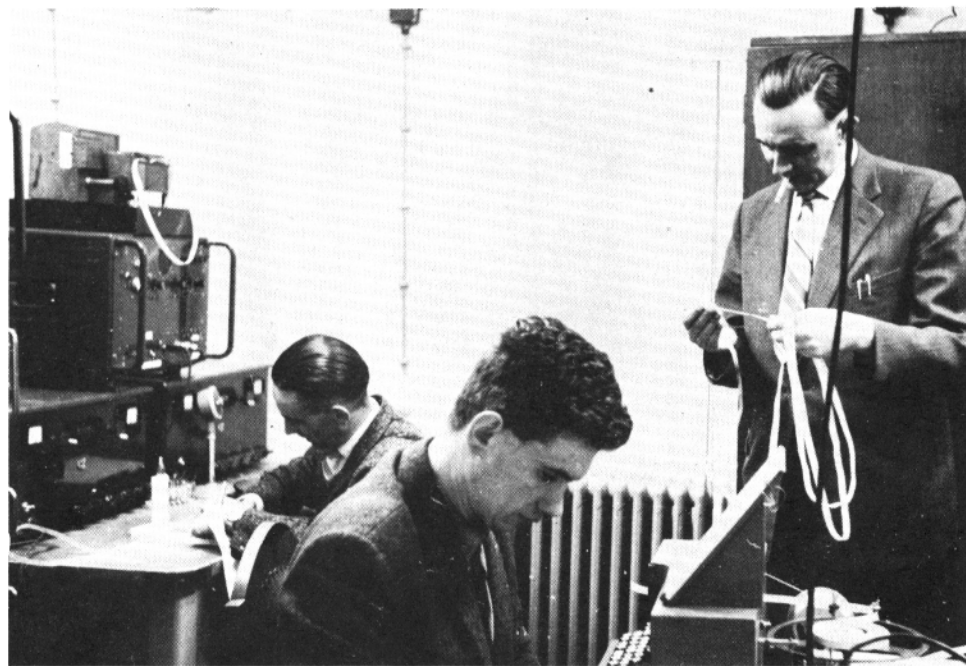
The radio gear has been loaned by the Dutch Army authorities and as can be seen, is very fb indeed, being right up to date, with many refinements such as crystal ovens, automatic frequency control, accurately calibrated FSK facilities and so on. The teleprinter is a Kleinschmidt TT-4A/TG, a very compact page printer which certainly made the writer's mouth water, such machines being quite unobtainable in England!

The RTTY News Bulletins are of course, cut on to tape and transmitted via an auto-head, transmissions going out simultaneously on both 80 and 2 metres. They are widely printed in Europe and are quite the highlight of the European RTTY enthusiasts' weekly operations schedule.

G2UK

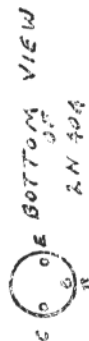
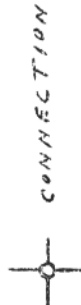
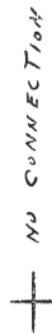
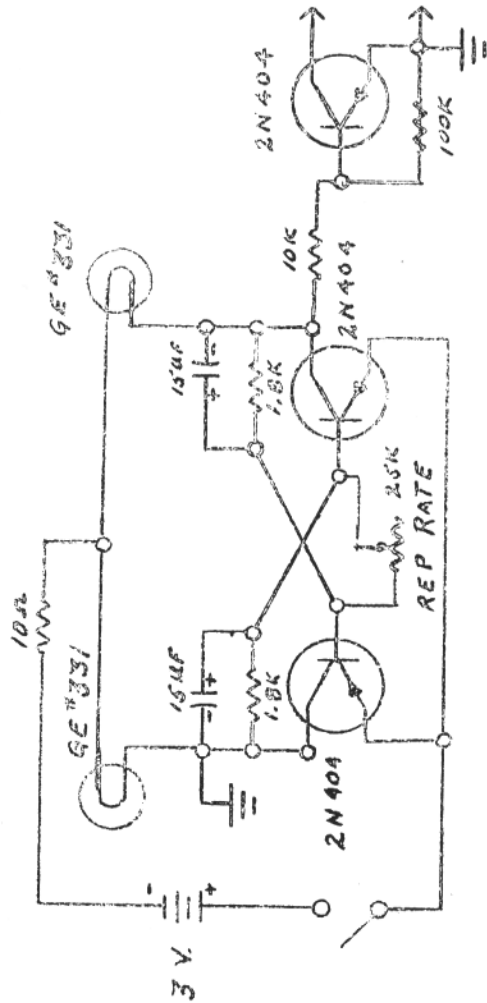


RTTY GEAR AT PAØYZ



PAØAA, FIRST OP. PETE, PAØYZ

KEYED OUTPUT
TO AFSK DIODE
REV. IF NECESSARY
FOR PROPER KEYING
POLARITY



RTTY REVERSAL GENERATOR
W2JAV

COLORADO AMATEUR TELEPRINTER SOCIETY FORMED

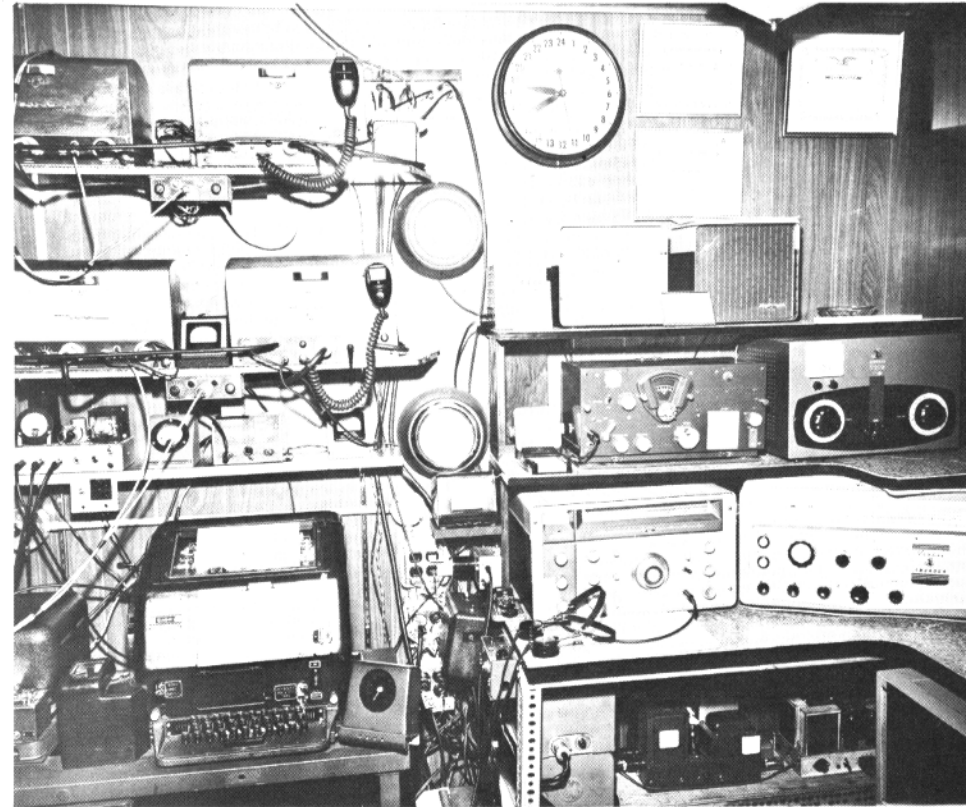
A meeting was held on July 17th and the following was accomplished. Elected a group of officers, arranged for financing of machines, for trucking and storage of machines, and are all set to go. The officers are: Harold Morris, KØAEK, President; Walter M. Reed, WØWRO, Secretary-Treasurer; Walt Nettles, WØAJL, first VP; Mace Warner, WØJRQ Second VP.

RTTY, Inc., wishes this new club all the best of everything.

RTTY MEETING

The RTTY Society of Southern California will hold its Summer Meeting at the home of W6AEE, 372 Warren Way, Arcadia, September 15, starting at approximately one P.M. Bring your swim trunks, and towels, hamburgers and drinks. Organ music by either Bill, W6NAT or Ray, W6MLZ. Bring your new gadgets to discuss. Demonstration of FRXD reperforator transmitter. Wives and Yl's welcome.

Warren Way is two blocks north of Las Tunas Blvd., which is main east/west street in Temple City. W6AEE's QTH is on southeast corner of Holly and Warren Way. Phone Hillcrest 7-2521.



K9DOF, ELKHART, INDIANA

DX-RTTY

Bud Schultz, W6CG
5226 N. Willmonte Ave.
Temple City, California

Howdy Gang:

This is indeed a red letter month here at DX headquarters! After all my griping about the lack of news for the past few weeks, I suddenly find the old mail bag is so full of good overseas reports that it is starting to tear apart at the seams. I have decided to use the space this month to let all of you "read the mail" with me. We can only touch the high spots—so let's get on with it.

Bill, G3CQE, evidently decided to take back the letter writing chores that he assigned to his XYL, Daphne last month and came up with two letters to Merrill and myself, consisting of nine closely spaced type-written pages crammed with all the news of the UK gang. As a matter of fact it is going to take the best part of a week-end for me to answer his fine effort. Here's some quotes from Bill: "what with one thing and another we have been really busy—you know what its like when you have a garden, a lot of decorating to do, a SSB rig to build, an old car to keep going, etc., etc. In fact I decided to build the SSB rig and then too many other things came up to get it finished. Its almost ready but I still have no P.A. Valve that I like with which to make a linear. I was hoping to use a pair of 4-125s and for awhile it looked like I might get a pair of them from the scrapyard but it did not come to anything, I'm afraid." Bill continues: "haven't been on the air recently, spent several hours looking for K3GIF and worked a number of East Coast stations but not Ed. RTTY still seems to be growing over here—ham strung by the usual lack of printers, of course. Prices of Creed Model 3s which we originally got for about seven dollars are now sold by blokes for fifty dollars, in some cases. On the other hand, a recent find was some Creed keyboard perfs selling for about two for five dollars! Tape equipment is still no use without TD's and TD's are the scarcest commodity in RTTY over here. In fact, as far as I know, there are only four TD's in use in the UK. I get one letter a week from G6CW and G2FUD in which they never fail to remind me to let them know the second I hear of a TD for sale—." While on his vacation Bill operated as GW3CQE from a beautiful spot in Wales and had plans to operate as GM3CQE from Scotland but the Wales location proved so intriguing he ran out of time before he got to Scotland. Bill also points out that one of the biggest obstacles to the UK group is

the lack of suitable toroids for building TU's. Recently Bob, W6NRM sent a shipment of toroids to the UK gang but these have been long since put to good use and at present the gang over there are really hurting for some source of toroids for their terminal gear. To quote Bill again; "I would like some dope on where and what price, including postage, our fellas could get toroids. I know that Merrill has sent toroids in the past and then there was that nice gesture from W6NRM but I would like to see some means by which these lads over here could just buy the things for themselves—as I have often said, there's no reason why you folks should subsidize European RTTY—it's just not right." Space won't permit Bill's description of his vacation thru England, but it certainly makes very entertaining reading.

Bob, G3GNR, writes a most interesting letter announcing he is about to leave the ranks of bachelorhood on Sept. 1 and take that long march down the aisle to connubial bliss. (Boy! I'm sure getting flowery for an old married coot!!) Bob reports that all he will have room for in their new flat is a few odds and ends including his trusty HRO but he will continue to follow the progress of his Pals over here thru the pages of "RTTY". We sure will miss you, Bob, but all of your friends over here wish you and Jennifer a long and happy married life.

The chief Ed. handed me a copy of the RTTY bulletin put out by Hans, DL1GP including an English translation. Hans is to be complimented on the excellent job he is doing in coordinating all the info on European RTTY activity into such a fine column. Hans lists 31 German hams who are presently licensed for RTTY operation. DL1GP points out again that RTTY operation in Germany is restricted to 3575-3600 Kcs and 14100-14125 Kcs. If you DX'ers are not monitoring these channels (especially above 14100 Kcs) you are passing up a chance to get another crack at a new country for your DX list. Hans also reports that PAØYZ continues to put out a fine RTTY bulletin each week from the VERON station, PAØAA. Reports here show this bulletin is being widely copied on the European continent.

Eric, VK3KF, Bruce, ZL1WB, and Alec, ZL3HJ continue to show up around 14090 each weekend with fine signals here on the West Coast. Eric recently returned from a fast trip to Madagascar, Mauritius, Cocos-Keeling, New Guinea, etc., but insists he is

getting too tired for such exotic travels and prefers the solitude of his shack and the noisy clatter of his Model 15. Here's an interesting quote from his recent Airmail; "Thanks for the WAC-RTTY Certificate, Bud—within two days of its arrival it graced the shack wall—even robbed Audrey of a picture frame; but I thought the certificate was more decorative than the original water colour painting—Audrey did not agree—but who is master of the household?—Don't answer that—you've been hogtied as long as I have." (Amen, Eric.) Eric reports that when he slows his printer down to 50 WPM he is able to make copy at VK2EG who is still hurting for a governed motor for his Model 26. We are still frantically trying to locate a governed motor for a Model 26 so VK2EG can get underway. This has been a very frustrating problem for all of us so if any of you can help out please get in touch with Merrill or myself. We will make the necessary arrangements to get the motor to Bill.

Alec, ZL3HJ writes that he is hearing lots of Stateside RTTY but his pip-squeak doesn't seem to be able to make much of a noise over here. He comes thru fine here on the Coast so give him a listen some week-end.

We still haven't started to make a dent in all the mail but my space is running out and I did want to take a few seconds to remind every red-blooded typer about the Second Annual World-Wide RTTY Sweepstakes. You still have about one month to get all that gear working and that new antenna in shape before the big ruckus begins. This year will find more DX RTTY stations (by a wide margin) on the air than ever before. In short—this will be the biggest RTTY activity since this green key operation started. Letters from all over the World tell us that nearly 100% participation can be expected from most of the places where RTTY is now allowed. A number of the DX'ers tell me they plan on taking a Holiday during the Contest week-end so they can spend the full period

on their keyboards. You will find a full resume of the rules elsewhere in this issue. They are almost identical to the last years' rules with several minor changes. If there are any points which are not clear, drop a card to W6AEE, W6TPJ or myself and we will try to explain the scoring. In any event—the Contest Committee will check the logs and give full credit to your efforts even if you fail to interpret the scoring correctly. The main thing is to get your rig on the air during the weekend of Oct. 20-22 and make as many contacts as possible. The QRM will be colossal, so expect the worst, but please don't blow your stack!! Have fun but don't alienate your family, your friends or your RTTY pals by taking the thing too seriously. You can't all win but you can have one heck of a good time trying! The worst that can happen to you is that you will come up with an electronic hangover the next day or so, but think of the new countries you can add to your DX list. Study the rules before the jamboree starts and make the most of the Country and Continent multipliers. A word here to the overseas contestants—try requesting answers to your CKs either up or down a few Kcs and in this way you will be able to keep your own frequency fairly clear. (I can dream, can't I?). Keep your contacts short and restrict them to just the contest data required. This will help to improve your score by increasing the number of contacts per hour and will reduce the tranquilizer and aspirin consumption by those waiting in line to swap numbers with you. This last suggestion also applies to the gang on this side also—remember, don't try to butter that rare DX chap up with a long ragchew so he will be sure to remember you when it's time to mail out the QSLs, most of the DX stations on RTTY are sure to QSL whether you give them a complete rundown on your station, your town, your hobbies, your family and your pets or whether you just give 'em the essential contest message.

Well, now that I have just alienated all my RTTY friends, I better wind this thing up and get to answering some of this mail.

C U all next month. 73

Bud W6CG

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 RTTY is the Official Publication
 of the

**RTTY Society of
 Southern California**

(A Non-Profit Amateur RTTY Club)

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