RTTY

NEWS OF AMATEUR RTTY

JANUARY 1960
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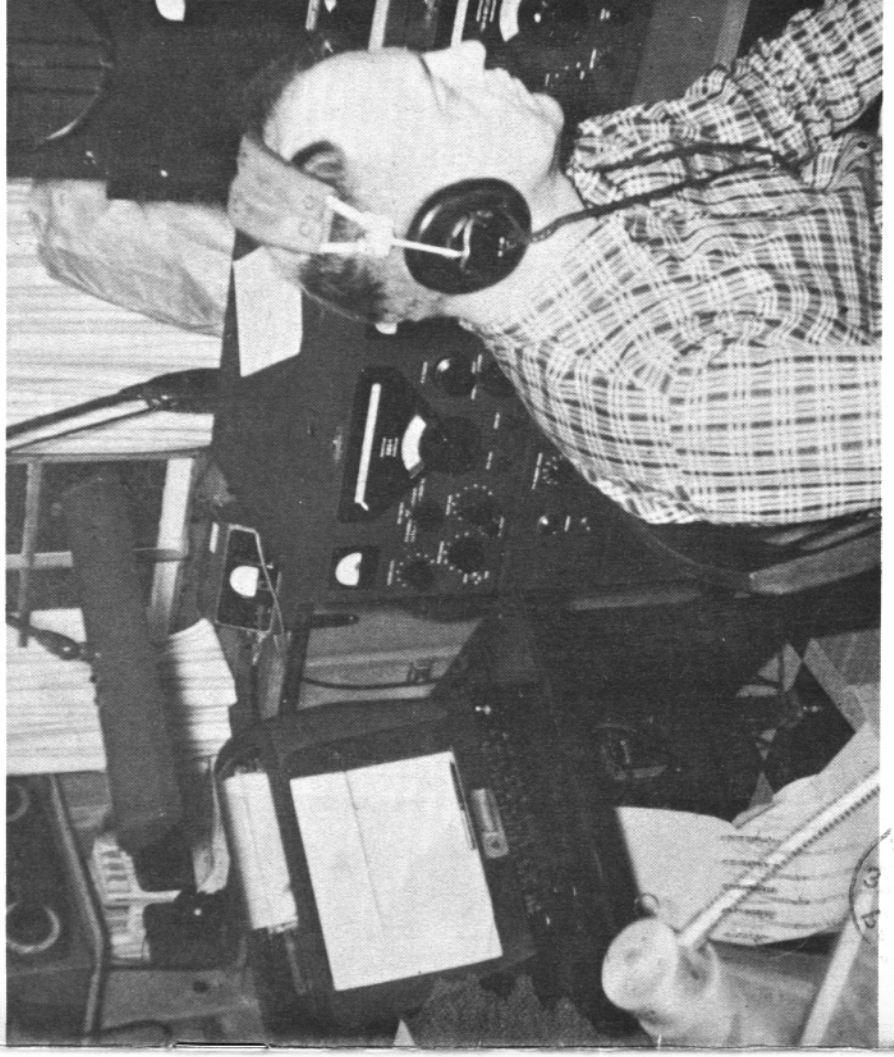

W3PYW at W3CZE WINNER 1959 BEEPSTAKES SS CONTEST

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: Model 14 typing reperf like new, series govn motor $150.00 ..... W3PYW

FOR SALE: Model 15 RO, Table, Rectifier WØIGL/6
4199 Don Luis Drive, Los Angeles 8, Calif.

FOR SALE: Terminal Units, Filters, custom wound toroids K9BRL

TRADE: Kleinschmidt Model TT 4/TG for model 15 ..... W7IWH
(28 volts DC)

FOR SALE: Limited number of bound 1959 RTTYs $5.00 ..... RTTY

FOR SALE: Teletype repairs, parts and service W2ZKV, W6EV, W9GRW

FOR SALE: Model 14 Transmitter Distributor $150.00
Art Addaway, 9709 Ben Hur, Whittier, Calif.

FOR SALE: Model 12 converted for electronic operation, Tape distributor, and perforator, tape head, Wheatstone polar relays, 215 polars W9RDJ

FOR SALE: Model 26 complete with table, Model 14 less table K6IZY

FOR SALE: Model 26 and table, completely overhauled W4RMW

FOR SALE: Model 15 and table W5GAD

FOR SALE: Keyboard perforator, good condition K4KKZ

FOR SALE: Model 26, with DC supply and Altronics TU W4BI

FOR SALE: Model 15s with tables, sync motors, TWX types, available approx 15, January, 1959 — $90.00 ..... RTTY, INC.

FOR SALE: Bound 1959 volume RTTY, — $5.00 ..... RTTY
..... oS .....

RTTY, Inc.
372 WEST WARREN WAY
Arcadia, California
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RESULTS 1959 RTTY "BEEPSTAKES" CONTEST

Another SS contest is history, and the transmitters are cooled down but the memory lingers on. We all missed our Beep, this contest, his interest in such activities are well recorded in past RTTYs and other magazines.

Top honors go to a fairly new RTTYer's station, W3CZE, operated jointly by himself and Frank White, W3PYW. Ray writes as follows: "In addition to being Frank's secretary during the Beep-stakes I was also the official photographer doing not so well as the only camera I had was one that I have taken to the west coast several times, and never took any pictures. And the film was two or three years old, so the results are not too good. Enclosed are the results.

Ray, W3CZE

Frank writes, glad to hear the news that we took first place. The equipment used was as follows:

2 Model 26s, 2 Tape xmitters, 2 Collins Receivers, 2 KWS-1s, L model 14 typing reperf, 2 power meters, 2 TUs, and 2 antennas.

Closely following Ray and Frank is another old timer as far as RTTY, Skipper, W2RUI, and then next was Jim at W5YM, Walt, WØAJL, Elmer, WØMPF. Others in the top scorers were, W5BGP, W1OUG, W2TKO, W8CAT, W1BDI, W2JAV, WØGK and VE7KX.

In the DX department were to be found, VK3KF, ZL1WB, G3CQE, KG1BO, KL7CAT, KL7MZ, KL7USA. This is the first RTTY contest for G3CQE in England.

As far as the logs received, RTTY lists some 152 stations and some 48 sections. Not all of the stations taking part in this BEEPSTAKES, sent their logs in, so it is possible that other stations may have taken part. Listed below are the results in detail.

Call	Section	Contacts	Pts	Sections	Score
W1AW	Conn				
W1BDI	Conn.	47	94	28	2632
W1BGW	E. Mass.	9	17	8	136
W1GNS	Conn.				
W1KOY	Conn.				
W1LFI	W. Mass.				
W1OUG	Conn.	67	134	30	4020
W1OUX	Conn.				
W1TLZ	Conn.	15	30	11	330
W1VSA	Vermont				
W2ACO	W. N. Y.				
W2BVE	N. N. J.				
W2FAN	W. N. Y.				
K2HHH	N. N. J.				
W2JAV	S. N. J.	45	90	29	2610
W2JCM	N. N. J.	30	60	19	1140
W2KFO	N. N. J.				
K2KGJ	N. N. J.				
W2ODA	N. N. J.	15	30	9	270
W2OKO	N. N. J.				
W2PAT	N. N. J.				
W2QZI	W. N. Y.				
W2RUI	W. N. Y.	99	108	34	6732
W2TAM	S. N. J.	11	22	10	220
W2TKO	W. N. Y.	55	109	35	3815
W2TOX	NYC/LI	17	34	10	340
K2TYY	NYC/LI				
K2YZD	N. N. J.				
W3CRO	E. Pa.				
W3CZE	Md.	108	216	40	8640
K3DNM	Del.				
W3MHD	W. Pa.	27	53	14	572
W3PRQ	Md.				
K3WAL	D. C.				
W4DGW/MM	??				
W4FJ	Va.	6	12	6	72
W4FZV	E. Fla.				
W4GJY	Tenn.	42	84	23	1932
W4GLY	Tenn.				
W4HUT	Tenn.				
W4IYP	E. Fla.				
W4JMT	Ky.				
W4JUQ	Va.	17	34	19	646
W4JXG	Tenn.	28	56	18	1008
W4MGT	Ky.				
W4SCF	Tenn.				
K4SLT	Va.	28	56	18	1008
W4VUE	Tenn.				
K4WCL	Ky.				
W4ZGR	E. Fla.				
K5AEX	/Tex.				
K5AXL	N. Tex.				
W5BGP	N. Tex.	71	142	33	4686
K5BQT	La.				
K5EOZ	S. Tex.	11	22	10	220
K5SPU	N. Mex.	10	20	10	200
W5TVG	Okla.	11	22	11	242
W5YM	Ark.	95	190	35	6650
W6AEE	L. A.	27	54	18	972
W6BNB	E. Bay				
W6CG	L. L. A.	35	70	24	1680
K6DSQ	Sac. Vly.	38	75	29	2175
W6HIF	L. A.				
W6JCK	San Dgo.	38	76	24	1824
K6JPR	E. Bay	43	86	22	1892
W6LDF	L. A.				
W6LIP	L. A.	7	12	5	60
W6MSG	Santa Barb.				
W6MTJ	San Fran.				
W6MXJ	Santa Clra.				
W6NRM	Santa Clra.	36	72	22	1584
K6OWQ (XYL)	L. A.	27	54	21	1134
W6VBU	Sac. Vly.				
W6VVF	San Fran.	3	5	3	15
K6ZBL	E. Bay				
K7ABB	Wash.	21	42	15	630
W7AUP	Ore.				
W7BEG	Ore.				
WCBE	Wash.	6	12	4	48
W7GRU	Idaho				
W7HJC	Wash.				
W7HRC	Wash.	29	57	17	969
W7IE	Ore.	24	48	15	720
W7KX	Wash.				
W7LPM	Wash.				
W7MAH	Nev.				
W7PHG	Wash.				
W7RQQ	Ore.	25	50	18	990
W7ZHJ	Wash.				
W8CAT	Mich.	63	126	28	3528
W8CRY	Mich.	2	4	2	8
W8CSH	Ohio				
W8CUY	Mich.				
W8DLT	Mich.				
W8FEV	Mich.				
W8KJK	Ohio	20	39	13	507
W8LEX	Ohio	29	58	16	928
W8RTZ	Mich.				
K9BRL	Ind.	29	57	21	1197
W9COW	Ill.				
K9DAS	Ind.	17	34	9	306
W9DPJ	Ind.				
K9DPU	Ind.				
W9DPY	Ill.				
K9EHP	Ill.	10	20	8	160
W9FRU	Ind.				
W9FXV	Ind.				
W9GPL	Ind.				
W9HHP	Ill.				
W9IBZ	Ind.				
W9IUV/9	Ill.				
W9OKS	Ill.				
K9PAS	Ind.				
K9POU	Ill.	U	14	6	84
W9PPW	Ill.				
W9PRX	Ill.	20	40	11	440
W9SPT	Ill.				
W9VMG	Ind.	39	77	18	1404
K9WAE	Ill.				
WØAJL	Colo.	82	164	35	5740
KØBFY	Colo.				
WØCZE	Mo.				
WAØ-DDA	Mo.				
WØDOA	Mo.				
WØDKN	Minn.				
WØFMK	Mo.				
WØFQW	Iowa	29	56	21	1176
WØFUH	Colo.				
WØGK	Kansas	44	87	25	2175
WØIFS	Minn.				
KØILA	Mo.				
WØITX	Mo.				
WØJHS	Minn.	13	26	10	260
WØJRQ	Colo.				
WØMPF	Mo.	78	156	31	4836
WØMQN	Mo.				
WØQQP	Mo.				
WØRX	Colo.				
WØTOB	Minn.				
WØUQJ	Iowa				
WØWTP	Minn.				
WØYRX	Mo.				
WØZVJ	Mo.				
VE2HY	Quebec				
VE6PQ	Alberta				
VE7EP	B. C.				
VE7KX	B. C.	41	82	26	2132
VK3KF	Australia				
ZL1WB	N. Z.	19	38	12	456
G3CQE	England	6	11	4	44
KG1BO	Greenland				
KL7-CAT/KL	Alaska				
KL7MZ	Alaska				
KL7USA	Alaska	2	4	2	8
154 Stns	48 Sections				

IMPROVING ACCURACY OF AUDIO FREQUENCY MEASUREMENTS

L. D. NELSON, WA6GGR
Belmont, California

A high degree of calibration is normally not required for audio signal generators when only gain/frequency runs on amplifiers and similar measurements are to be made. Frequency calibration accuracy of about ±2% is considered quite adequate for the general run of laboratory audio signal generators. The Wien bridge audio oscillator in the RDJ Pulse Analyzer also falls into this class when in good condition and when properly aligned. The RDJ has appeared on the surplus market at reasonable prices in recent months. The better kit instruments generally have an accuracy of about 5%. Most of the RC audio signal generators have excellent waveform and constant output amplitude characteristics.

In the design of filters for radioteletype or other critical applications such limited frequency calibration accuracy leaves much to be desired. As an example, 2% accuracy results in a possibility of about ±60 cycles error at the tone frequency of 2975 cycles. Similarly, a 5% accuracy results in about ±150 cycles error possibility. Accordingly, some more precise calibration method must be resorted to if the general run of audio signal generators are to be used effectively. Where counters or other precision audio frequency measuring devices are available this presents no problem. However the average teletyper usually has access to only the basic essentials of test equipment such as a scope, audio oscillator and VTVM. And they are frequently of the kit variety. Some ready means of frequency calibration is very necessary if filters and other frequency sensitive components are to be constructed and aligned properly.

Fortunately in most areas there is a readily available audio frequency source of fairly high precision and good waveform. This is the 60 cycle power line. The large power networks have the power line frequency automatically held to very close tolerance under normal conditions. Averaged over a few seconds the 60 cycle line frequency is normally accurate to within a few hundredths of a cycle. During a very short interval there may be some deviation as corrections are being made. This deviation should normally not exceed 0.15 cycle and is usually corrected very rapidly. Frequency comparison between the audio signal generator and power line frequency "standard" can be made over the entire audio frequency range of interest to radio teletype using an oscilloscope and the Lissajous figure method.

With the 60 cycle power line source fed to the input of the scope vertical deflection amplifier and the audio signal generator fed to the horizontal input, Lissajous patterns will appear to come to rest on the scope screen as the generator is tuned through its range. For example, at 3000 cycles the pattern will appear to come to rest as two vertical trains of sine waves, compressed at top and bottom. As the audio signals change phase or drift slightly in frequency the two wave trains appear to drift past each other, one going up and the other down. If the pattern could be made to stand still and it was possible to count them, there would be 50 loops vertically and one horizontally at top and bottom. This is the 50:1 pattern. Due to small variations in phase and frequency of the two audio signals it is rarely possible to keep the pattern stationary for more than a fraction of a second.

As the audio oscillator frequency is changed slightly other more complicated Lissajous figures will appear to come to rest momentarily. At 2970 the figure looks like two vertical columns of figure "8"s drifting past one another with a single line of cross-over points in the center of the pattern. This is the 99:2 pattern. It is not possible to count the loops because of the inability to stop the pattern and the large number of loops. Also the top and bottom of the pattern is so compressed that the individual loops of the pattern cannot be resolved. It is about twice as difficult to make this pattern stay still as the pattern first described.

As the oscillator is tuned to 2940 cycles another pattern as first described comes to rest. This is the 49:1 pattern. At 2910 a pattern similar to the second described pattern comes to rest. This is the 97:2 pattern. The first type of pattern repeats at every integral 60 cycle interval. The second type of pattern repeats every 60 cycles at the odd multiples of 30 cycles, or midway in frequency between the first order patterns.

Thus, there are easily obtained check points every 30 cycles through the audio spectrum of interest. As the frequency is reduced it is increasingly easier to obtain the patterns.

Between the more easily obtained first and second order Lissajous patterns described above there are additional figures yielding intermediate check points. At the higher audio frequencies these are more difficult to bring to rest and to identify. However with an oscillator of good stability and slow tuning rate, such as a Hewlett-Packard Oscillator or RDJ Pulse Analyzer, they are perfectly usuable up to and beyond 3000 cycles. The third order type of figure looks like two "cable knit" patterns moving vertically past each other with two vertical lines of cross-over points. The fourth order pattern appears as two "cable knit" patterns moving vertically past each other but with three vertical lines of cross-over points. As discussed above the higher order patterns are harder to "stop." The third order is about three times as difficult to stop as the first order. The fourth order patterns appear to move about four times as fast as the first order and it is accordingly about four times as hard to bring them to rest. With the usual oscillator tuning rate and stability the Lissajous figure greater than the fourth order are too difficult to use at frequencies above a couple of kilocycles. At lower frequencies the fifth order patterns are usable. As noted above the point at which the higher order patterns become usable is dependent on oscillator tuning rate, oscillator short term stability and stability of the standard reference frequency.

Since 60 divided by 2, 3, 4, 5 and 6 yield integers the first, second, third, fourth, fifth and sixth order Lissajous patterns occur at integral frequencies (this is an advantage of the sexigesimal system). The first order patterns appear at multiples of 60 cycles, the second order at multiples of 30 cycles (60:2), the third order at multiples of 20 cycles (60:3), the fourth order at multiples of 15 cycles (60:4), the fifth order at multiples of 12 cycles (60:5) and the sixth order at multiples of 10 cycles (60:6). The higher order Lissajous figures only appear at points not occupied by a figure of lower order. For example, at even multiples of 30 cycles only the first order patterns are seen. At odd multiples of 30 cycles only the second order patterns are seen. The first through the fourth order pattern appearances for the frequency interval from 2820 to 3120 are shown for illustration. It can be seen from the chart there is a maximum of 15 cycles and a minimum of 5 cycles between adjacent check points using the first through the fourth order patterns.

At the higher audio frequencies it is necessary to establish the identity of the first order check point to resolve any ambiguity due to inaccurate calibration of the audio signal generator dial or excessive space between dial markings. For instance, with a first order pattern on the scope and the dial at 3000 cycles on an oscillator of 2% accuracy you cannot be certain whether you are looking at the 49:1, 50:1 or 51:1 pattern. With lower calibration accuracy the situation is, of course, worse. Fortunately the 600 cycle tone of WWV or WWVH can be readily used to establish a known starting point. With a 3000 cycle signal from the audio signal generator into the horizontal input of the scope and the 600 cycle tone from WWVH into the vertical input in place of the 60 cycle reference signal, a 5:1 Lissajous figure should be seen. Substituting the 60 cycle reference source for the WWVH tone will now result in the 50:1 Lissajous pattern on the scope. A simple tuned circuit resonated at 600 cycles will greatly assist in cleaning up the WWVH tone if the signal is noisy. An 0.8

microfarad capacitor across an 88 millihenry load coil will give a nice high Q tuned circuit at approximately 600 cycles. A 25K to 50K resistor should be placed between the receiver output and the tuned circuit. The connection to the scope vertical input is then made at the junction of the isolating resistor and the tuned circuit. Instead of the WWVH tone the signal from a tuning fork oscillator or other fixed frequency oscillator of high precision could be used if available. However, WWVH signals are normally available and are extremely accurate. Once a check point is determined a fiducial mark can be placed on the signal generator dial to preclude having to go through the procedure every time measurements are made. The use of such a mark assumes the signal generator has reasonable long term frequency stability.

With the starting point known it is thereafter only necessary to observe the oscilloscope and keep track of the Lissajous patterns as they come to rest as the audio signal generator tuning is changed. The scope should be used in this manner to read the frequency rather than the signal generator dial. A calibration correction curve or chart for the signal generator may easily be prepared using this method.

An example of the use of the above technique is the checking of a terminal unit tone filter for 2975 cycles.

At 60 speed the minimum frequency bandwidth required to pass teletype pulses without distortion is approximately 40 cycles. Assume a design bandwidth of 200 cycles to allow for signal drift, other than 850 cycles shift, etc. A plot of the filter frequency response is desired to check center frequency, bandwidth and shape. The scope vertical input should be connected to a 60 cycle power line source of a volt or so and the vertical gain of the scope set near maximum. The audio signal generator should be connected to the horizontal input of the scope and through an isolating pad to the input of the filter under test. The output of the filter should be terminated in the proper resistance and an AC VTVM (or VTVM with RF probe) connected across the terminating resistance. This assumes the VTVM impedance is very high compared to the filter termination.

The signal generator should be set to 3000 cycles as outlined above. The output can be set for a convenient VTVM reading near full scale. This reading should be recorded. Tune the signal generator up in frequency observing the first and second order Lissajous patterns. The first second order pattern will be at 3030 cycles. The VTVM reading should be recorded. The next first order pattern will be at 3069 cycles. Again the VTVM reading should be recorded. Readings should be made up through the pass band of the filter. Repeat the process from 3000 cycles down through the filter pass band. If finer detail is desired near the center of the pass band the higher order Lissajous patterns can be used. The results of this point-by-point frequency run can be plotted on graph paper and a smooth curve drawn to show the filter response characteristics.

Another possible use of the calibration technique is for checking or adjusting a 425 cycle tuning fork standard.

Examination discloses that no first through fifth order 60 cycle check point occurs at 425 cycles. However, a fourth order point does occur at 1275 cycles. 1275 and 425 bear a 3:1 ratio and therefore these frequencies will yield a 3:1 first order Lissajous pattern. The 1275 cycle fourth order pattern occurs immediately after the 21:1 first order pattern at 1260 cycles. If the frequency of the oscillator under test is known to be of sufficient accuracy it can be used to easily spot the 21:1 check point at 1260 cycles. The 600 cycle WWVH tone can also be used to readily spot the 20:1 60 cycle check point at 1200 cycles. When the audio signal generator is accurately set to 1275 cycles and the fork standard signal is substituted for the 60 cycle signal a 3:1 Lissajous pattern should be observed if the fork oscillator is on frequency.

Use of the Lissajous figure frequency comparison method of calibration permits measurement accuracy of at least an order of magnitude better than normally possible with ordinarily availlable test equipment.

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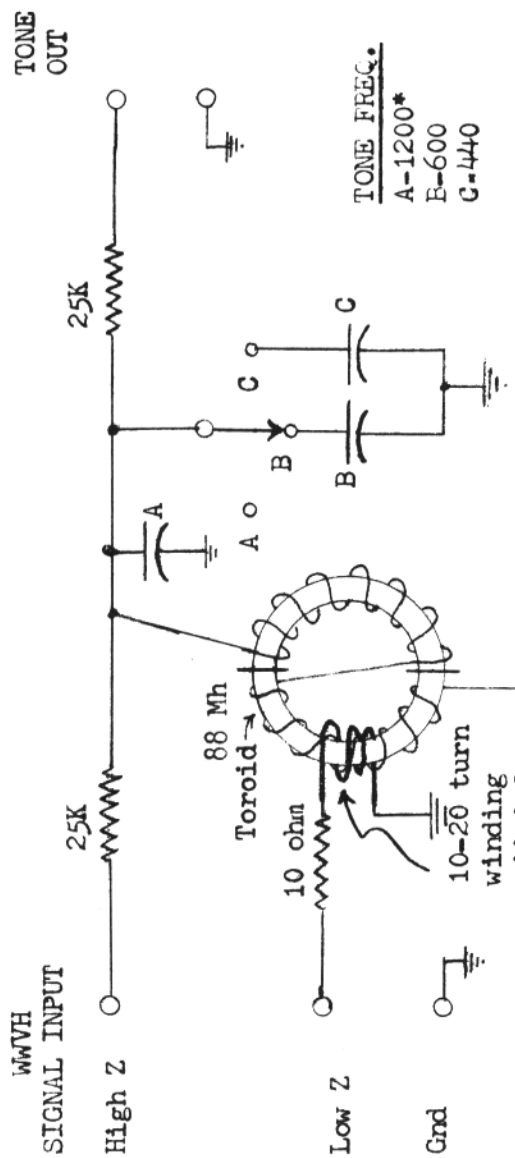
TONE FILTER FOR STANDARD FREQUENCY BROADCAST TONES



TONE FREQ.	NOMINAL TOTAL CAPACITY
A-1200*	0.2 mfd
B-600	0.8 mfd
C-440	1.5 mfd

*WWVH time tick freq. WWV time tick is 1000 cycles, use 0.3 mfd.

Circuit capacities at switch positions A, B and C adjusted by padding to resonate toroid at tone freqs.

SEVENTH SWEEPSTAKES

The Seventh Anniversary RTTY Sweepstakes contest will be held February 12, starting at Six PM, EST. Running thru Three AM EST the 14th. This will be 33 hours of operating time, also a slight change in the times due to the many letters received.

LISSAJOUS PATTERN APPEARANCES
FIRST THROUGH FOURTH ORDER
60 CYCLE REFERENCE
FREQUENCY INTERVAL 2820-3120 CYCLES

FREQUENCY	I	II	III	IV
2820	47:1			
2835				189:4
2840			142:3	
2850		95:2		
2860			143:3	
2865				191:4
2880	48:1			
2895				193:4
2900			145:3	
2910		97:2		
2920			146:3	
2925				195:4
2940	49:1			
2955				197:4
2960			148:3	
2970		99:2		
2980			149:3	
2985				199:4
3000	50:1			
3015				201:4
3020			151:3	
3030		101:2		
3040			152:3	
3045				203:4
3060	51:1			
3075				205:4
3080			154:3	
3090		103:2		
3100			155:3	
3105				207:4
3120	52:1			

Rules are the same as in the past. Stations will exchange messages consisting of message number, station call, ARRL section of station, check or RST, time (0000-2400 Preferred), date and band used. One point for each message transmitted by RTTY and acknowledged by RTTY. One point for each message received by RTTY only. The total points multiplied by the number of ARRL sections or countries counted for DXCC credit, gives the score. The same stations may be worked on different bands for additional points but the section multiplier does not increase. Logs should be mailed to RTTY, INC., not later than the 20th of February to be included in results.

This contest will enable many of the newer stations to work additional stations and provide an excellent opportunity for DX contacts. Frequencies to watch are, 3620, 7090, 7140, 14090, 14340, 21015, 21090 kcs. Note that VEs, Gs, ZLs, and VKs operate below our normal 7140 and 14340 frequencies at 7090 and 14090. There should be a good chance to make WAC RTTY during the SS contest since England, Africa, South America, as well as Australia will be on for sure and Okinawa too. See you during the contest.

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RTTY is the Official Publication of the

RTTY Society of Southern California

and is published for the benefit of all RTTY Amateurs and Experimenters

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For Information Regarding the Society Contact the Following:

W6AEE — Merrill Swan
W6SCQ — Lewis Rogerson
For Traffic Net Information:
W6FLW W6IZJ
For "RTTY" Information:
W6DEO W6AEE

BRITISH AMATEUR RADIO TELETYPE GROUP

NEWS SHEET NO. 4

NOVEMBER, 1959

As we suggested in our last News Sheet, this issue contains news of the first RTTY QSO's to take place in the British Isles.

° ° °

On 25th Septmeber last, at 1330 hrs B.S.T., G2UK received G3CQE's RTTY signals transmitted from Norwich. Parts of the tape showed solid copy and for a first attempt the results were very encouraging indeed. Transmission was on 3.6 Mc/s with 850 c/s FSK. During the next week or so, two way tests were carried out between G3CQE and G2UK, some quite good two-way QSO's being achieved. G3IAO also had some receiving gear working and he was able to copy G2UK solid.

During the weeks that followed, G3CQE got going on 21 Mc/s and made the first G/VE RTTY QSO—with VE7KX, which is as it should be — and the first G/W QSO's. By now Bill has worked so many stations "on the other side of the pond" that we have quite lost track of what he has done! Very nice work Bill, and congratulations on getting British RTTY on the Dx map so quickly.

Since all this excitement, things have settled down a bit, G3CQE working Dx on 21 Mc/s whenever conditions are suitable and G2UK putting out test transmissions most lunch hours on 3.6Mc/s. Some nice copy has been received from G3BST and several other members have located G2UK's signals and reported on them. So, we are now "on-the-air" — and all we need is a few more stations to join the activity list.

° ° °

"Getting Started on RTTY"

This series of articles has now commenced in "The Radio Constructor" (November issue), available from your usual supplier.

We have received the following letter from the General Secretary, Radio Society of Great Britain:—(29th September 1959).

"With reference to your letter dated August 29th, 1959, I attach hereto copy of a letter which has today been sent to the G.P.O. on the instruction of the Council. A statement based on the information set out in the letter will appear in an early issue of the Bulletin.

"I have been instructed by the Council to advise you that the Society will raise no objection to the use of U.K. amateurs of the system known as radio teletype provided the system is not used in the band 1800 - 2000 kc/s.

"The Council note that the G.P.O. is prepared to authorize individual amateurs to use this system of transmission and that the position will be reviewed in the light of twelve months experience.

"The Council notes with satisfaction that the G.P.O. will place emphasis on the transmission of callsigns in plain language on at least the occasions stipulated in the license."

Since writing the above paragraph, the appropriate number of the Bulletin has appeared, in which the above information is given in resume form.

In the absence of any further information, we suggest that those amateurs proposing to transmit RTTY should write to the G.P.O., informing them of their proposed activity and giving the frequencies on which they intend operating, together with brief details of the transmitting gear, and also mentioning that they are members of the BARTG. If members like to send these particulars to the Hon. Sec., he will see that they are forwarded to the appropriate G.P.O. branch.

° ° °

Radio Hobbies Exhibition

The Group Stand at this exhibition will be adjacent to that occupied by Data Publications Ltd., (Stand 24). Your Hon. Sec. hopes to be on duty most of the time and will be very pleased to meet as many members of the Group as possible — so please make a point of asking for him.

Membership of the Group reached a total of 59 on 31-10-59.

MAILBAG

Your Hon. Sec.'s mailbag has been pretty heavy these past few weeks. He has tried to answer each letter individually but if anyone has been left out — humble apolo-

gies. A few points from letters may be of interest to members generally:

S.A.C. Thomas, RAF Gaydon, would like information on frequencies, times, etc., of teletype plain language Press Agency transmissions – so would your Hon. Sec., – any offers?

R. W. Evans, Liverpool, draws attention to the article "A Filterless Terminal Unit for FSK" in the July 1958 "QST." Advantage of the circuit is apparently that it is very easy to get going. Should be a good circuit to try out, and would anyone doing so, please let us know the results.

"Shank" GM8FM, Edinburgh, has found the following books in his Public Library, all of which deal with RTTY. "Elementary Telegraphy," E. Missier, Newnes @ 12/-6d. "Modern Telegraphy Systems & Equipment," W. T. Perkins, Newnes @ 10/6d. "Telegraphy," Freebody, Pitman @ 80/-d. Your Hon. Sec., has obtained a copy of the first mentioned, it has an excellent description of the Type 3 T/P, and is thoroughly recommended. Should be on every RTTY-er's bookshelf.

Adrian Smallbone, Penarth, has a terminal unit going and has been able to work a nome made high speed tape inker from it. It is of the type described by W2BFD in the RTTY Handbook.

James Hepburn, VE7KX, the founder of BARTG, we might almost say, continues to write his most encouraging and instructive letters. Thanks Jim, will write again when we have got this News Sheet off the slipway.

Finally, we reproduce on page 4 a very nice letter from *Bruce Rowlings ZL1WB,* sending to the Group greetings from the RTTY gang "down under."

* * *

RTTY Handbook

We now have a few more copies of this handbook and any member requiring same, ON LOAN ONLY, please let the Hon. Sec. know. Please enclose 6d to cover postage.

* * *

QTH ZL1WB. September 17th, 1959.
Hon. Secretary,
British Amateur Radio Teletype Group,
Suffolk.
Dear Arthur,

Greetings to B.A.R.T.G. from "Down Under"! I was delighted to read the account of your group in the September 1959 "RTTY" which arrived here today. For some time I have read, heard and written a deal on the subject of amateur teletype in the U.K. and I am surely pleased that efforts by Jim, VE7KX, and others, have brought into being the group that you represent. I hope that this facet of our hobby will grow into a strong section of the amateur community in England; and I trust that those who seek to "scuttle" experimentations with RTTY will quickly adopt a more favorable and reasonable attitude. Here in New Zealand we have successfully neutralised opposition to our ham teletype, and I know, that in the course of time, a similar condition will prevail for you.

Our current allocations for frequency shift keying are as follows:

Zero to 850 cycles shift
3500 to 3550 kcs.
14000 to 14100 kcs.
28000 to 28100 kcs.
7000 to 7051 kcs.
21000 to 21100 kcs.

All bands higher than the ten metre allocation, AFSK may be employed without restriction.

Power limitation. 100 watts anode rating.

Stations possessing RTTY equipment:

ZL1AHO, Ron Sykes, Papakura, Auckland. Model 26
ZL1AKW, Hilton McFarlane, Papakura, Auckland. Model 14/TD
ZL3HJ, Alec Hyndman, Kaiapoi R.D. Cntbry. Model 26
ZL1WB, Bruce Rowlings, Onerahi, Whangarei. Model 15, 14 & 14/TD.

Additionally, VR2AC, Jack Paton in Fiji, shortly to return to N. Z., possesses a Model 26, also ZK1BS, Bill Scarborough has a Model 26 on the way to Raro.

In Australia, VK3KE, Eric Ferguson, in Melbourne, uses a Model 15.

So, Arthur, and fellows, I hope this informtion is of some use to you, and I shall continue to follow your progress with RTTY with very much interest. For the present every good wish to you all, and keep up the good work! (Figs U E ES RY)

ZL1WB.

* * *

Equipment Topics

We have acquired a very nice little Siemens Teleprinter, Fernschreiber 34F, tape printer with typewriter ribbon inking arrangements and a 250V a.c. motor, from William Batey & Co., at £6, plus packing and carriage. Ours is in excellent condition

RTTY DX

BUD SCHULTZ W6CG

The Holidays are over, the bands are beginning to settle down to more stable conditions and DX is really starting to roll in again. That seems to sum up the reports filtering into this nerve center from the DX-minded RTTY gang during the past couple of weeks. The U. K. boys seem to lead the DX parade with activity reported from all parts of the world.

The RTTY contacts between G3CQE and VK3KF still rate top billing in the DX department. Here's a quote from a recent letter from Bill, G3CQE: "In a fine QSO with Eric yesterday he sez he has to return his printer at the close of the year—he says the band has not been open to W for him for some time—he thinks it will be January before it opens again. Meanwhile am skedding him every day that I am home—1230 GMT to be exact. We usually make it 5x9 plus." Bill points out that the path to VK3-KF is 10,630 miles from his QTH.

A new one just making his RTTY debut on the bands from the British Isles is GM3-KSN. He is located on the outer Hebridean Islands off the coast of GM. Hope to have specific times and frequencies on this one in next month's blurb. In the meantime, give him a listen—he will be a welcome addition to your DX list.

G2UK has been putting out regular daily test transmissions on 3.6 Mcs. He reports he has received some nice reports on his copy. Speaking of 3.5 Mcs—Skipper, W2RUI, is arranging a series of skeds with Bill, G3-CQE, on 3.5 and 7 Mcs. You low frequency lads might give this one a listen and try to get in on the fun. Bill says he copies W stations on forty and eighty with no trouble.

Incidentally, those of you interested in getting the latest "scoop" on British teletype activities can contact G2UK and receive copies of the BARTG monthly news sheet. It's a very well written, interesting summary of RTTY activities throughout the U. K. A small contribution to cover the cost of mailing is in order if you would like to receive this excellent publication—Doc is presently taking care of it on his own and if many of the overseas gang ask for it; it could become rather costly to him in these days of increased postal rates.

Merrill, W6AEE, reports that by the time this goes to press Henry, ZS1FD, should have his printer and be on the 14 and 21Mcs bands. If you need Africa for your WAC-RTTY award, Henry should be your "best bet" at this time. In the past, African contacts have been hard to come by but this should really ease the situation.

No news from Bruce, ZL1WB, this month other than the fact that he is still very active when the band opens to W land. Bruce still rates as the most active of the DX stations heard over here on RTTY and is liable to turn up at any time on any band"! Don't hide your candle under a tube shield, Bruce, let's hear from ya!!

Eric, VK3KF, is stymied by the loss of his printer and the poor band condx to W. His skeds with G3CQE have been working out with excellent copy at both ends. Hope we can do something about getting some gear down to you, Eric.

Ye Olde DX editor received a most welcome letter from Cas, KR6AK, (Now WØ-NMH/4). Cas says "Got a good job here. Am going back to parachuting again. Jumping from aircraft in flight the army calls it. Yesterday was in the air and only one minute from jump time and got red smoke on the drop zone meaning no jump because of wind—suits me, I don't like being drug by a parachute, anyhow." (Ed. note: That's his idea of a good job?) Cas says he expects to be on the air with CW very shortly but will hold off on RTTY until he completes his new exciter.

Nick, KL7MZ, busy putting Geri's (KL7ALZ) HT32-A on RTTY. He should have everything percolating by the time you read this. And speaking of KL7 ——the RTTY DX committee, under tremendous pressure(?) by persons and stations who must remain anonymous, have reconsidered the country status of KL7 and KH6 and will allow these two prefixes to count as separate RTTY DX countries with no strings attached. (Now let me up—I'm all cut and bleeding!!).

By way of Merrill, W6AEE and Walt, WØAJL comes a most interesting story (and fine fotos) of a real exciting new one to the DX ranks. As a matter of fact, by the

time this column is published, George Starkey, OA5G should be actively giving out South American Contacts to the gang. To quote from Walt's letter to Merrill: "George, OA5G, is the head maintenance man for the Marcona Mining Company in San Juan, Peru. They mine iron ore and ship it in their own ships to the United States as well as several European countries and Japan. They employ about 1500 people down there and the mine is 17 miles from the loading dock which is a power driven chain affair that extends way out into the bay—is is very dry and there is no vegetation. There are two parts of town all company owned. One for the Peruvian workers and one for the Peruvian and American executives.—George has the model 26 we sent him and has the "Mu-Western" terminal unit and has been copying—George said that he was ready to be on the air within 24 hours upon receipt of the FSK unit that Mace built for him—Down there the news is hard to come by and he has been running a bulletin board with newscasts from the States as well as Japan and there is much interest in the more up to date news than they get in their delayed papers. George is about 49 years old, big as a barn and as nice as anyone could be — he is going on an expedition to the Galapagos soon. I hope we can get him to take some RTTY gear with him. I would like to be able to say I have worked the Galapagos Islands on RTTY. (Ed. Note: Amen — to that last statement, Walt) — So let's all bug him a little. OA4GM is furnishing the Yacht and they have plenty of power etc. so let's get George to take RTTY along." Thanks, Walt, for a most interesting story on OA5G . I'm sure he will get plenty of pressure from the RTTY gang regarding that expedition to the Galapagos.

Due to the fact that the deadline for this issue came before the last issue had been delivered to everyone there were only a few entries in the DX RTTY countries worked box score. Hope by this time next month a lot of you will find time to check thru your logs and QSL cards and send us the result. Please send us any DX scoop or rumors that you happen to run across. This column has to depend on its readers for support — so help! help! ! The address is 5226 Willmonte, Temple City, Calif. Happy hunting and 73. Bud W6CG

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RTTY DX BOX SCORE
(Countries worked on 2-way RTTY)

W6AEE	13
W6CG	13
K6OWQ	12
VE7KX	11
KL7MZ	9
KL7ALZ	8

Continued from Page 10

but requires adjustment. Has anyone any information, manuals, etc., for these machines?

Messrs Peter Seymour, 410 Beverly Road, Hull, are able to supply a unit, which at the price they are asking, should interest members. At £3-10-0d., these TC-sets will provide a useful variable voltage d.c. power supply suitable for the T/P motor. Besides many other components, such as switches, capacitors and a centre zero 40-0-40 mA meter, these units contain a power supply using an autotransformer with a wide range of inputs and outputs. Primarily designed for inputs of 115 or 230V a.c., a variable voltage output in the range 100 to 120V d.c. at 0.5A can be obtained by means of stud switches.

STOP PRESS . . .

We have just received a letter from the G.P.O., clarifying the proceedure for those proposing to transmit RTTY. A letter should be sent to:— G.P.O., Radio Services Dept., Headquarters Buildings, St. Martin's-le-Grand, London. E.C.1., asking for authorisation to use RTTY. This will then be sent to amateurs, in the form of a letter, which should be attached to their licence. Authorisation will be for all bands for which emission F1 is already officially allowed, except for the 1.8 - 2 Mc/s shared band. Recognised International RTTY codes must be used and the call sign must be sent in plain language on at least the occasions stipulated in the licence.

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Someone has a copy of "The Teletype Story." Would he please return it as soon as possible.

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That is all for this month — see you at the Exhibition! G2UK

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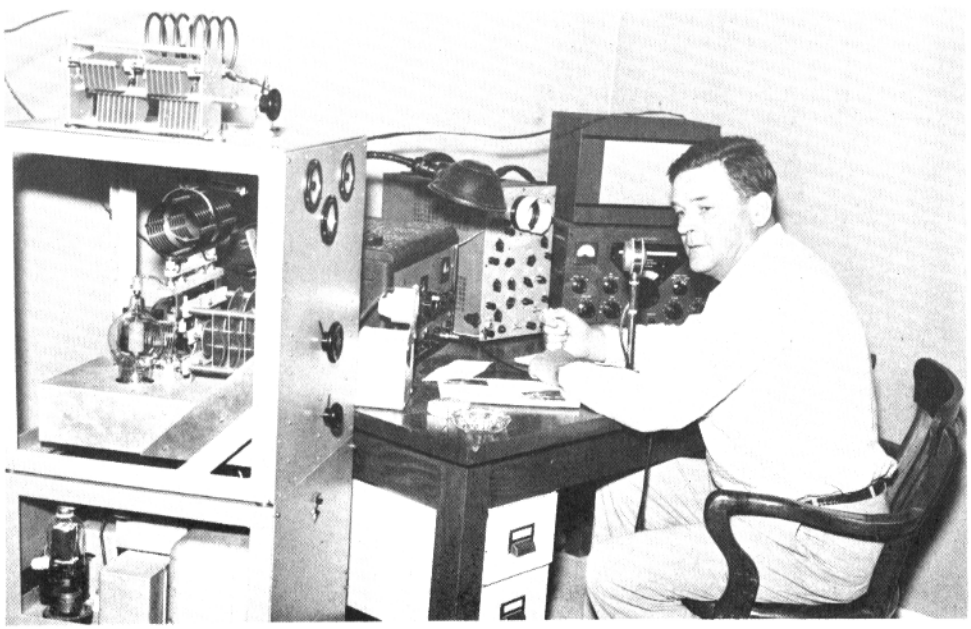
OA5G — SAN JUAN BAY, PERU



OA5G

W9VMG

GEORGE F. HATCH

1022 Lake Avenue
Fort Wayne, Indiana

Enclosed are snap shots of Ed Green, 4422 Marquette Dr., Fort Wayne, Ind., Oct. 60 K9DAS, winner of the Chi-RTTY model 28 printer which our group walked away with. Incidentally, he has it on the air. It's not sitting in a corner gathering dust.

Ed, K9DAS is City Engineer for the City of Fort Wayne and formerly was construction engineer for the Nickle Plate Railroad.

Also enclosed are snap shots of my station.

Hope to have some more coming through shortly. We are finally selling the local group on RTTY. We now have K9DPU on forty RTTY and W9FRU of Decatur, Ind., abt 20 miles south of Fort Wayne on 40 RTTY as well as Ed and myself. Of course we have several on two meters that get on now and then.

I also have included my log and did much better this year. Guess I had more time available. One of the contacts was one way only and am not sure how to figure the score as VE2HY acknowledged my message but I lost him in the QRM before he even got started.

Man, speaking of QRM, I never knew there were that many active RTTYers in the country.

Seems like we are missing the boat by piling up all in about 20 kc. How about starting at 7100 kc. and assigning 7100 to 7110 to call district No. one, 7110 to 7120 to call district No. two, 7120 to 7130 to call district No. three, etc. Then we could have WAS with much less interference. This would be for the contest only but why pile up. Maybe some one else has a better idea but it sure should be given some consideration.

Incidentally, where were you? Probably buried under the QRM.

Just one more quickie and then I will sign. Obtained one of Ben's (W9UE) Automates for my model 26 to get automatic carriage return and line shift. Boy does it work swell. So the other nite I am working a W4 who is using a model fourteen tape reperf and he doesn't have an end of the line indicator so he is having trouble wondering when he is going off the end of the paper and getting in line shift. I advise him to disregard as I have the new gadget from Ben and my machine will put in what he leaves out. So we talk for a good half hour with perfect copy as far as we are concerned. When I signed with him who should call me but Ben himself W9UE. Seems that Ben has been sitting there pulling his hair wondering what has happened to his Kleinschmidt. No carriage return or line shift coming through and he thinks it is on his end. So after I explain it to him he was much relieved to find that it wasn't necessary to rebuild his gear. Seems like the old mistro got caught in his own net.

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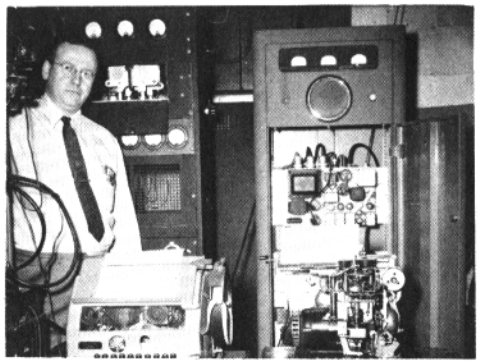

W9VMG

S-L-A-T-S FORMED

Just had my daughter here in the office type up the log on the contest so thought I would add a couple of lines. Using this typewriter sure is a lot different than the model 28 at home.

I want to tell you how much I enjoyed the contest even tho I didn't have the time to prepare for it as I had anticipated. I hope to be all set for the next one and am already looking forward to it.

On the way home from the 'Cats' meeting in Chicago Mel Hart and a couple of the other fellows decided to see if there was enough interest in starting a RTTY club here in St. Louis so they sent out a QST on RTTY and also some notices to those interested and the first meeting was held in the home of Mel Hart WØIBZ. There were sixteen in attendance in all and refreshments and food was served and some training films pertaining to operation and technical side of RTTY were shown.

The meeting was called to order by Mel Hart and the following officers were nomintaed and elected for the coming year.

Mel Hart—WØIBZ president
Larry Amelung—WØNOY Vice president
Elmer Ford—WØMPF secretary
Noble Redman—W9PRX Treasurer.

Such subjects as, where to meet, social events, how often to meet and others were discussed but no definite decision reached as yet.

Those in attendance were:

Robert A. Teutner, WOIDOA; A. T. Corbin, W5KXD; C. E. Donaldson, WOWVA; B. Bartell, kODFR; John Davison, WOZFX Mel Doerhoff, KOLLC; Paul E. Meyer, KODOK; Ernie Wyle, WOYRX; Stu Bartfeld, WOIGU; Carl Mosley, WOFQY; Noble Redman, W9PRX; Bob Fenton, WOQPP; Gene Bell, KOBVM; Joe Rome; Elmer Ford, WOMPF; Larry Amelung, WONOY; Mel Hart, WOIBZ.

Hope you will pardon the typing and will give you more information on the progress of the S L A T S as it progresses . . Best 73,

Elmer Ford

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K9DAS and W9MGV

K9DAS — ED GREEN