Additional Classified on Page 15

FOR SALE: MODEL 28 KSR with non-overline. $275.00 Model 28 typing reperf with three speed gear box. $175.00. B. Schlott 4471 Mapleton Road, Lockport, New York 14094

MAINLINE TT/L special plug in filters built to order. Send SASE for prices and other information. Standard toroid for Mainline TT/O also available. All filters precision tuned. J.R. Crane, W8LEW, 26927 Westwood Lane, Olmstead Falls, Ohio 44138

ORDER: SIMPLEX AUTO-CR & LF kit for model 15 or 19 printers. Completely mechanical with instructions $7.50 pp. Robert Zalenka, W8TMO, 14446 Beach Rd., Fenton, Mi. 48430.

RTTY RIBBON INK: Intense, highly legible black. Cheaper than replacing ribbons. Is it good? Ask any user. Big 2 ounces only $1.00. Marvin Cook, WA2RDO. 1992 Windsor Street, Westbury, N.Y. 11590

LARGE TT/L-2 DRAWING - 15x 30. $1.00 postpaid. Keith Petersen , W8SDZ, 1418 Genesee. Royal Oak, Mich. 48073. Phone 313-588-3991.

WANTED: 1.2 or 1.5 filter for 75A-4. Advise price. Bob Nolan, WA6WGL, 714 Evandwood Ave., West Covina, Calif. 91790

WANTED MANUALS for Model 26 and FRXD. Also cover for FRXD-10 as shown in Feb. '64 CQ magazine. Sell or swap for RTTY gear two Motorola 5V 2 meter FM units. L.W. Petry, K9BJM, 704 Wilson Ave., Hoopeston, Illinois 60942.

HAVE COLLINS F500B-14 mechanical filter to swap for F455J-15 or F500B-08; or sell for $35 plus postage. Sell Burnell S-7129 toroidal filter, 5 sections, 50 kHz center freq. 1500 hZ band width, $20. G.H. Goldstone, W8AP, 1010 Burnham Rd., Bloomfield Hills, Michigan 48013

Martin Geisler of Van Nuys, a former classified advertiser, phones long distance to say he has been snowed under with orders and asks patience until he can catch

Return Requested
RTTY JOURNAL
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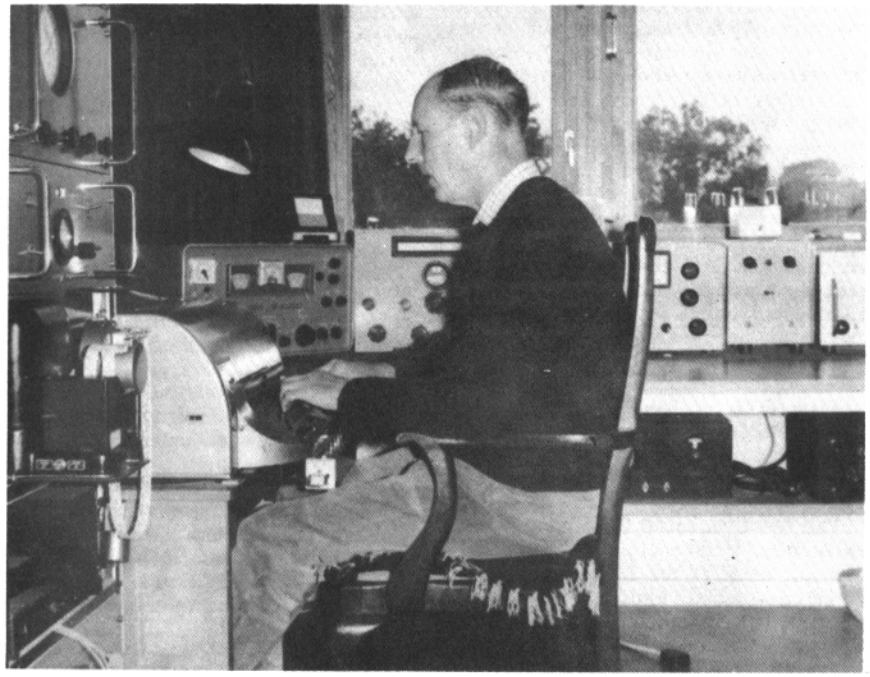
First Class Mail --

RTTY JOURNAL

APRIL 1969

EXCLUSIVELY AMATEUR RADIO TELETYPE

Volume 17 No. 4 30 Cents



G8LT 'Robin'

A nice letter along with this photo of Robin Addie, G8LT brings us up-to-date on RTTY in Great Britain. Three things in particular we might mention. He and Reg. G6JF are firmly sold on narrow shift and practice what they preach. The popular Creed machine in use in England and the continent take only 69 characters to a line, our's 72 so remember when working DX to keep your lines shorter. Third the Bell signal is upper case J. instead of S as on Teletype machines. A string of ' ' ' ' ' can make a lot of noise in England. With the BARTG contest just over as you read this we hope many of you had a chance to work Robin.

First RTTY WAE CONTEST

The Deutscher Amateur Radio Club (DARC), the sponsor of the WAE certificate (a special WAE/2xRTTY certificate will be offered in the near future), has the honour to invite RTTY Amateurs all over the world to participate in the 1st RTTY WAE Contest 1969.

1. Contest period: April 26, 0000 GMT to April 27, 2400 GMT (cf. also 5: rest period)
2. Contest call: CQ WAE de. . .
3. Bands: All bands 3.5 thru 28 MHz
4. Classifications: Single operator, Multi operator, single transmitter.
5. Rest period: Only 36 hours of operation out of the 48 hours are permitted for single operator stations. The 12 hours of non operation may be taken in one, but not more than 3 periods anytime during the contest. The periods need not be equal but must total a minimum of 12 hours and be clearly indicated in the log.
6. Exchange: a) QSO-Nr. b) RST c) Time in GMT
7. Points: Each two way RTTY contact with stations within one's own continent will count 1 point, with stations outside one's own continent 3 points. Contacts of non-european stations with european stations will count 5 points for non-europeans but 3 points for europeans.

Each station may be worked once per band.

Each QTC cf. also 1o: QTC-Traffic) given or received-will count 1 point.

8. Multiplier: The multiplier is determined by the number of countries worked on each band.

The WAE country list and the latest ARRL country list will be used. In addition each call area in the following countries will be considered a multiplier: JA, PY, VE, VO, VK, W/K, ZL, ZS, UA9, UAØ.

9. Scoring: The final score is the total QSO points plus QTC points multiplied by the sum total countries from all bands.

10. QTC-Traffic: Additional point credit can be realized by making use of the QTC traffic feature.

A QTC is a report of a confirmed QSO that has taken place earlier in the contest and later sent back to another station. The general idea being that after a number of stations has been worked, a list of these stations can be reported back during a QSO with another station. An additional 1 point credit can be claimed for each station reported.

a) QTC contains time, call and QSO number of the station being reported.ie,: 1300-DJ3KR-50. This means that a 1300 GMT you worked DJ3KR and received number 50.

b) A QSO can be reported only once and not back to the originating station.

c) Only a maximum of 5 QTCs to a station per band is permitted. You may work the same station several times to complete this quota. Only the original contact, however, has QSO point value.

d) Keep a uniform list of QTC's sent. QTC 3/5 indicated that this is the 3rd series of QTCs sent and that 5 QSOs are reported.

11. Contest Awards and classifications of winners: Certificates to the Top Ten Single operator, non Europe and Europe,

Certificates to the Top Five Multi Operator, non Europe and Europe.

Cerfificates to the Top Three stations with the most QTCs sent,

Certificates to the continental leaders.

12. Disqualification: Violation of the rules of the contest, or unsportsmanlike conduct, or taking credit for excessive duplicate contacts will be deemed sufficient cause for disqualification.

13. Logs: Logs must contain: bands, exchanges sent, call signs, exchanges received, QTCs sent and received, points, multipliers.

Use a separate log for each band.

Enclose a summary sheet showing the scoring, rest period, classification, your name and address in BLOCK LETTERS!

14. Deadline: June 10th 1969.

15. The decisions of the Contest-Committee are final.

The Contest-Committee of the DARC DX Bureau.

Address:

Uli Stolz, DJ9XB
In der Ostert 3
D-597 Plettenberg
W. Germany

YY

BROAD MINDED

USE NARROW SHIFT

Using the DX-100 on RTTY

L. L. FILBY, KILPS
P. O. Box 32
Passumpsic, Vt. 05861

Soon after getting my receiving equipment going for RTTY, I set about to find a suitable transmitter to use with the setup. I wanted something that would be completely separate from the rest of the station equipment, inexpensive, relatively simple to put on RTTY, wide range tuned circuits capable of hitting out of band MARS frequencies, respectable power output and completely self contained. I finally settled for the Heath DX-100 and I don't think I could have made a better choice. The unit here cost me $54 in mint condition including shipping charges and at that price I could modify the thing to my heart's content without worrying about ruining resale value. This particular unit is used exclusively for MARS operation but it is a simple matter to set the thing up for ham band operation.

It was felt that the original VFO would not have adequate stability so it was decided to eliminate that possibility right from the start. The transmitter was removed from the case and the original VFO assembly removed. A 3 1/2 x 4 1/2 inch hole was cut where the VFO dial window was. This hole is used to mount various FSK generators that have been tried with the rig. The front panel was removed at this time for repainting. The original paint scheme did not match the new hole too well. The entire unit was reassembled using new, better quality knobs and new decals. The finished product looks very sharp. The rig was the original selection of four crystals for AM-CW operation and what used to be the VFO position now selects the particular FSK generator installed.

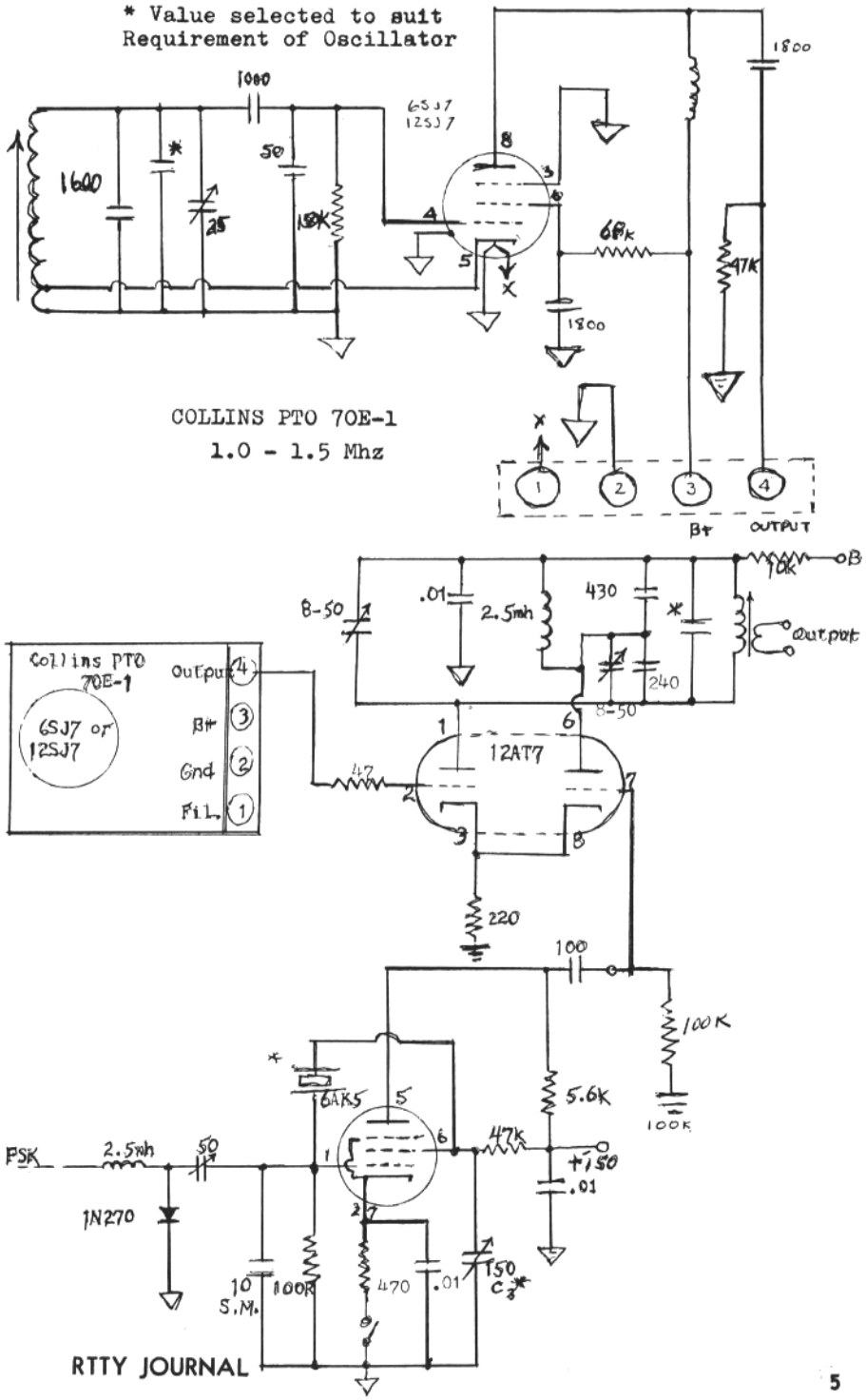
The system in current use is a Collins 70E-1 PTO salvaged from an ARC-2 transceiver. The original range of this particular PTO was 1.0-1.5 MHZ. Originally it was intended to use this PTO in a compact heterodyne FSK generator. For the moment I am not using the heterodyne system for reasons I will go into later, but I will give a brief description of that system. The PTO is used at its original frequency range in conjunction with the crystal FSK described by Hoff in the May '65 QST. The two signals are mixed using the mixer circuit from the Collins KWS-1. The PTO is allowed to run continuously thus assuring operation. The crystal oscillator is switched in and out by the station control. The PTO covers the range of its frequency in 12 turns. A 5:1 vernier from a BC-375 driving the PTO gives a total of 60 turns to cover the entire range. This figures out to about 8.3 KHZ per knob revolution. Once the shift has been adjusted, it holds over any portion of the dial. Variable capacitor C may be a fixed unit in this application because it is not necessary to "rubber" the crystal around. Any VFO with the required stability could be used in such a system and the dimensions of such a unit could easily be kept within the space occupied by the original VFO. Nothing says you have to use this particular crystal shift circuit either. This general type of FSK generator offers a number of advantages over the multiplying VFO type of circuit and should be a definite improvement over the original DX-100 VFO.

Although it was originally planned that I would use the above circuit, I was in such a hurry to get going that I took the quick and simple way out for the time being. Besides, I had just completed a loop supply for my W2JAV demodulator using the Mainline FSK driver system described by Hoff and I needed something to try it out on. So . . . I went ahead and installed the saturated diode shifter inside the PTO. There is very little room to spare inside the PTO and it was quite a trick to fit in the extra components. There are four terminals coming out of the PTO; B+, filament, output and ground terminal. The FSK voltage was fed into terminal originally used for grounding. I don't know why the ground terminal was included in the first place because a case ground works quite well. The shift capacitor was installed next to the tube socket and a hole was punched

in the top of the outer case for access to this trimmer. The PTO shifted very nicely so it was decided to go ahead and modify the range of its frequency. In this case I was interested in the frequencies 3245 through 3289 KHZ. I replaced the specially made 1000 pf capacitor in the tuned circuit with a 100 pf silver mica unit. This pushed the range of the PTO up to about 2.2 through 3.6 MHZ to cover the required range directly. As you may note, total range of the PTO stretched out to nearly triple the original value. With the same vernier dial system, the tuning rate has expanded to approximately 23 KHZ per knob revolution. This is still easy to handle and getting on frequency is accomplished smoothly and accurately. Putting this particular PTO on the ham bands could be accomplished by modifying the capacity to put the oscillator at half the required frequency or turns could be removed from the coil to hit 80M directly. I ran the risk of destroying the stability characteristics of the PTO by tampering with the components but no problem was encountered in this respect. I have checked the unit against WWV and an LM frequency meter and the stability far exceeds that of some of the newer sideband equipment I have checked, and would be more than adequate for ham band RTTY operation.

At the moment I do not have equipment capable of measuring the shift with any great degree of accuracy but on the scope it appears to hold fairly well over the range of 3245 to 3289 KHZ. Anyway, it is a simple matter to adjust the shift exactly with a station that has more accurate measuring facilities. I would have preferred to have the shift trimmer positioned so that it could be adjusted from the front but there was no room for it there. A small hole was drilled in the top of the perforated cabinet top to allow adjustment of the shift. When the heterodyne system is completed the shift adjustment will be adjustable from the front panel. I did run into some problems when I first used the PTO in the DX-100. At the start I had the impression that the PTO would have to run continuously to achieve any degree of stability so an attempt was made to utilize the "silent VFO" concept. This attempt was a complete flop. Although the PTO is well sealed up and all leads were shielded and bypassed, there was far too much signal leakage to allow this method of operation. My fears concerning frequency drift due to switching the B+ on and off from transmit to receive turned out to be completely unfounded, although I had been told by an owner of a Collins 32V which uses a similar PTO that he had run into problems trying to switch the B+ in this manner. I could have used a varactor diode to run the PTO off frequency during receive if it had been a problem but such was not the case. The only switching required to activate the DX-100 is the B+ to the PTO. The finals are clamped off when no drive is present. The 5763 driver has a small amount of bias applied so it does not burn up with no drive applied. Transmitter is set up for CW and with the key plug removed, the cathode of the 12BY7 buffer stage is grounded. I ran into troubles with this buffer stage. The plate ran cherry red under continuous key down condition. A voltage chart furnished by Health calls for 370 volts on this stage. This particular DX-100 has been converted to solid state power and the measured low B+ was up to nearly 400 volts. I thought this was a bit high so I rearranged the power supply wiring to single section choke input filter instead of the capacitive input as originally designed. This dropped the B+ to a level that the 12BY7 could handle and solved the problem of the plate showing color. I did lose some grid drive in the process but I can still achieve the required drive with the control advanced to maximum. Probably the proper way to solve the problem would have been to insert a dropping resistor in the supply line to the 12BY7 rather than lower the overall low B+. with the situation as it is I may find that I have insufficient drive on some of the higher bands. So far I have only used the thing on the 3 MHZ frequencies.

FSK driver voltage is put into the transmitter through pin #5 of the accessory socket. Pins #6 & #7 are used to feed the switched B+ to the FSK generator. Pins #2 & #4 have 115 VAC available when the plate switch is on. This switched AC can be used to furnish operation of the antenna relay through one section of the station control (T/R) switch. Spotting of frequency is accomplished by turning plate switch to "off", and activating station T/R switch to transmit. This turns on PTO, buffer and driver. B+ on receiver is not cut during transmit here because I get sufficient isolation in the co-axial antenna relay. With the plate switch of the DX-100 off, no voltage is furnished to the antenna relay. Thus the receiver remains connected to the antenna and with the spotting signal,



you are able to zero accurately to a desired signal. Leaving the B+ on the receiver during transmit allows me to monitor my own signal through the demodulator scope display. The excellent shielding of my particular receiver and the isolation afforded by the co-axial relay make this possible. It may not be possible to do this with some receivers. Station T/R control consists of (1) switching B+ to FSK generator, (2) antenna relay, (3) bypassing polar relay for positive closing of the loop.

Although I feel that the stability is adequate for ham band work, it leaves something to be desired for MARS net use. After using the PTO for a while now, I feel that crystal FSK would give me greater operating convenience. I have not yet come to trust the VFO to the extent that I would transmit without first checking my frequency carefully, and there isn't really time for this in a busy traffic net. Of course I do have the spotting signal available and I use this to check my frequency against net control from time to time during the course of an hour's net. If the PTO is allowed to run for the full hour without adjustment it appears to drift about 200 CPS and this is not good enough, at least not for me. I feel that for this sort of operation where operation is confined to two or three frequencies, crystal FSK would be the ideal answer once it was adjusted properly. It is a simple matter to make a crystal FSK generator to go into front subpanel. There are several ways this could be done. You could make up a single crystal FSK circuit using plug in crystals. This would likely require minor adjustment to frequency and shift for each crystal used. As these crystal FSK units are not that large, you could assemble two, three or more on the subpanel with switch selection. In this way, once each one was set for shift and center frequency, it would require very little attention from then on. Another idea along this line is to make one crystal FSK circuit containing everything except the crystal and shift & frequency trimmers. The latter portions of the circuit coild be made up in small plug in units along the same idea used in the HRO series of receivers.

So . . . there are some ideas to chew on. I found the DX-100 to be a really fine, flexible piece of gear for RTTY operation. It puts out a clean, stable signal on RTTY and as I have it set up here, can still be used on AM-CW as a standby transmitter. It has been reported to be putting out a potent signal on RTTY. I have been running it at about 190 watts input.

This project beats converting ART-13s to RTTY operation and a lot of other systems I have seen in use, and it gives you a chance to try out some of the different VFO and shift circuits with a minimum of sweat and tears.

***

Hint

Orv POTTER, WB2FPT

This modification may be of use to those using tape. It consists of a microswitch so mounted that it is closed any time the "signal bell hammer arm" moves to ring the bell. This switch is used to operate a relay that has several contact points on it. One set of contacts are used to hold the relay energized once it has been activated by the bell hammer arm switch. This would be a normally open set of contacts. A normally closed set of contacts are in series with the TD clutch circuit. Now, when punching a tape that I want to stop in a predetermined position, I simply print upper case "S" or "Bell" and when the tape is in the TD reaches this point it will automatically stop the TD. This feature is handy when working in a contest because the inserted data changes with every contact while the general format remains the same. It also is nice to have if you sent the RTTY type QSL cards on a TD with a pre-punched tape as it is easy to program the TD to stop for the name, date, time, etc. Once the TD has been stopped by the relay, you may print anything you wish on the keyboard and then start the TD again by pushing a normally closed push button switch that is in series with the coil of the relay that caused the TD to stop.

So there you have it, and the whole thing works like a charm. If there are any questions, I will try to answer them.

***

BACK ISSUES —

ONLY back issues available are July through December 1966, February 1968 to date. The TT/L-2 Reprint is also available. Single copies are 30¢ each. RTTY JOURNAL Binders are available at $2.50 pp in US, Canada or Mexico. $3.50 elsewhere.

***

FSK'ing a GSB 100

James BOYER, WØNAE
131 8th St.
Brookings, So. Dak. 57006

Due to the VFO mixing process, and interaction experienced between the two diode shifters used; wiring the diode shifters as normally used is not possible with the GSB-100. With the cathode of the diodes grounded inverted keying results, and simply reversing the diodes in the two shifters caused too much interaction between them when trying to set the shift.

The diodes must be used with the anodes (un-banded end) to ground. An SPDT slide switch was mounted between both the VFO lead and the FSK voltage lead to the shifters. Reversing the two diodes and the two switches cured both of the above mentioned problems. The lead to the VFO is 2 1/2 inches long. It is run from the SPDT switch through a no. 30 hole drilled near the VFO tube socket. It then continues underneath the chassis to pin 3 of the VFO tube.

Both diode shifters are mounted on four lug terminal strips, which are held by a 6-32 machine screw to an "L" bracket. The L bracket is mounted to the right and front of the VFO tube by one of the screws holding the shield underneath the chassis.

To set the shift, (either 170 or 850) tune in the Space frequency by holding down the break key on the teletype machine, and then adjusting the transmitter frequency for maximum space indication. After this is done release the break key and adjust the shifter trimmer capacitor for maximum Mark indication. There will be some interaction between Space and Mark so this process will have to be repeated two or three times for precise shift setting. Throwing both switches to the other position adjust the shift of the other diode shifter in the same manner as before.

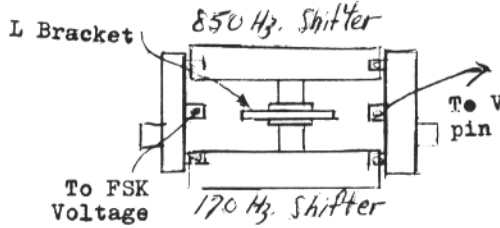
The TT/0* semi-counter and a VTVM were used here to set the shift and is a very easy way to do a good job.

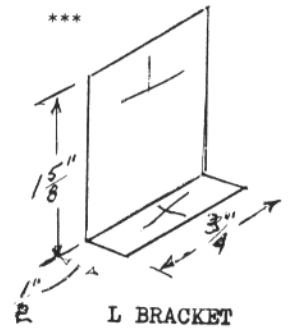
* The TT/0 Semi-counter, Irv Hoff, QST May 1966.

POSTSCRIPT: The GSB-100 using a 6DQ5 is not meant for constant operation at full power as in RTTY. After tuning the rig as for normal CW use, back the loading control on down until the plate tuning and loading controls peak with a meter indication of 5 to 6. At this power rating the tube and transmitter will operate much cooler. It might also be wise to epoxy a small phonograph type motor and fan to the chassis for cooling the final and power transformer.

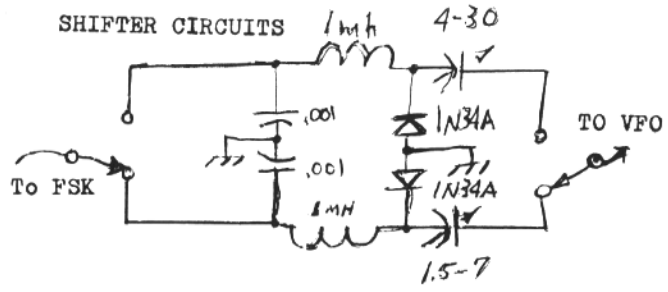
***

METHOD of MOUNTING SHIFTERS





SHIFTER CIRCUITS



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Model 15 Teletype Printer — Oct 3
More Information On Automatic Receiver Frequency Control (VK3KF) — Jan 7

NETS, COPYING, ETC.
Commerical RTTY Frequencies — Jul 14
Interstate Auto-Start Net — Mar 18

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Making a Teleprinter go . . . . June 10
Sending a RTTY signal . September 12
An AFSK Keyer . . . . . October 12
Receiving a RTTY signal. December 8

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INTEGRATING RTTY EQUIPMENT

Robert GAYE, K2LGJ

Thought I would inclose the following sketch for what it is worth. I haven't seen any "systems" articles showing the integration of equipment in a "complete" RTTY station so don't know if what I have done will be of interest to anybody. I am new to RTTY and have tried to take advantage of other peoples experiences as well as being original in my set up. When it came to integrating the tape gear it was "original" since I had nothing to go by.

I have a old model 26, a model 14 RO reperf and td and wanted to get maximum flexibility out of the gear for a minimum amount of hay-wire. From what I can tell I have full "ASR" capability and possibly an extra feature. I don't think that on the Model 19 or 28 ASR you can repeat. That is, make a new tape from an existing tape. This system will. (For what it's worth.)

The trick to the thing was to connect the machinery in a logical order to minimize the switching problems. Physically the set-up is very neat. Everything is housed in a minibox including switches for motor control and TD clutching as well as an end of line light for the REPERF. All the wiring is done with belden cable (Ham-Rotor cable) tied directly into the machines with all functions brought out so that I shouldn't have to dig into them if I want to make changes. These cables terminate in octal plugs which all go to the minibox.

In normal operation the switch is in the "K" position. The reperf is not in the line and the motor may be on or off as it's magnets are held by the local loop supply. In this position you have normal printer and keyboard operation as well as ability to run tape with the TD.

The "KT" position allows normal receiving on the printer and tape transmit via the TD. The local loop now has the keyboard as well as the reperf so that tapes can be made and sent simultaneously with a tape loop.

The "T" and "R" positions have essentially the same function. The difference being that in the "T" position you have normal printer operation on receive as well as the local loop tape repeating or reperfing it. Possibly these two functions should have their names interchanged.

The local loop supply can be any supply capable of supplying 60 mils of about 100 volts. A variable resistor may be used to adjust to this current.

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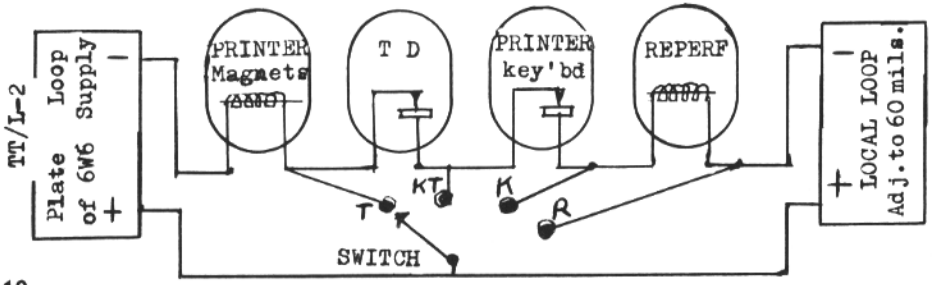

VHF RTTY NEWS

RON GUENTZLER, W8BBB Editor
Route 1, Box 30
Ada, Ohio 45810

As those of you who have been reading this "column" for the past two years know, we were (and still are) attempting to provide news of RTTY activity. At times, the information provided by readers was adequate (in volume and content) and we were able, over a period of about a year, to assembly a fairly good picture of VHF RTTY activity in the U.S.

Even during the "successful" year, there were many disappointments. Each time we received a "lead" (the name or call of someone who might have information of activity in a particular area) we immediately wrote asking for information. These "unsolicited" inquiries have always, with one notable exception, resulted in no reply!

We would like to obtain information about VHF RTTY activity anywhere. The more complete the information, the better. We are interested in the number of active or reasonably-active stations (a complete list of all calls and locations is desirable, but not necessary), frequencies, polarization, type of modulation, hours of operation, auto-start capabilities, etc. The reason for wanting this information is that it lets others know where and when to look for contacts and what type of contact can be made.

As we obtained information, the most obvious lack of operating information was from the area around NYC. Judging by the population there it appeared that there must be at least two stations within hearing range of each other.

Before proceeding we would like to make another point. When crystal controlled transmitters and receivers are to be used, it is obviously important to not only know what frequency to use but also to know what frequencies are already being used for other types of activity. We discussed the choice of operating frequency about two years ago. Avoiding a "channel" being used for some other mode was stressed.

With the above points in mind, we asked Gordon Pugh, W1JTB/W2GHR, for information regarding frequencies in use in the New York City area. He immediately supplied a large quantity of information. The following is an excerpt from his letter and a summary of his list of frequencies in use:

"RTTY in this area. . .is limited to 146.700. Both the Mt. Beacon (NY) and Killington (VT) repeaters are equipped with 146.700 transmit from the up link. 146.700 receive is being tried at Mt. Beacon and will be added to Killington this summer. Since this frequency is not compatible with the duplexers at these sites, 52.96 is programmed for repeat to 146.700 in addition to the other frequencies on two meters.

"A new repeater is being set up at Mt. Snow in Vermont that will also be capable of 146.700 operation similar to Killington. One problem is anticipated at all these stations -- FCC is planning to restrict repeaters to one band operation in very tight segments -- this could completely wreck many repeaters in the East and it will prevent operation with the present cross-band teletype setup."

Gordon lists the following frequencies as being in use: 146.22, .25, .28, .31, .37, .40, .46, .52, .58, .61, .64, .70, .76, .79, .82, .88, .94, and .98. Notice that essentially every frequency between 146.22 and 146.980 MHz at a spacing of 30 kHz is in use. Both the range of frequencies and the 30 kHz spacing are noteworthy. All these frequencies are being used for 20F3 or 40F3 (voice FM) with the exceptions of 146.520 MHz which is used for voice AM (6A3) in the New York City area and 146.700 MHz which is used for AFSK on FM (40F2). Not only are all of these frequencies used, but in practically every case there are three or more stations or repeaters on each channel! The most popular repeater input frequency (146.340

MHz) has two stations within 50 miles of NYC, five stations between 50 and 150 miles from NYC, and four stations over 150 miles from NYC but still close enough to require coordination of operation (VT, NH, MA).

It is obvious from the amount and completeness of the information that Gordon provided that he has been spending some time on the coordination problems and that he has had some cooperation. Thank you, Gordon.

Several months ago we received a lot of information regarding VHF RTTY operation in the Boston area. Because of lack of space, we gave only the essential information. Here is the complete list of stations in the Boston area as of several months age: 51.192 MHz, 6A2, horizontal beams, some stations are continuous A/S.

WA1AXU	Bart	Lexington
WA1BEZ	Bud	Natick
WA1BJM	Howard	Sharon
WA1CHW	Pete	Lexington
WA1DPX	Ray	Arlington
W1DRH	Art	Lexington
K1DVI	Chet	Clinton
W1EEU	Frank	Hudson, NH
WA1EJW	Jim	Arlington
WA1FCI	Jeff	Lexington
W1GNV	John	Clinton
WA1HDM	Ken	Gloucester
WA1HHS	Jerry	Saxonville
WA1HON	Eric	Lincoln
WA1HVG	Will	Peabody
K1JUN	Jeff	Dedham
K1KEC	Steve	Concord
K1KQJ	Karl	Wilton, NH
W1LLY	Paul	Arlington
W1LPF	Cal	Clinton
W1MCG	Ed	Arlington
K1NSN	Bob	Concord
W1QEA	Pete	Dudley
K1QLA	Craig	Lexington
K1RAW	Dick	Saxonville
K1UCT	Jack	Whitman
K1WTZ	Art	Chelmsford
K1YCM	Les	Acton
W1YET	Ken	Dudley
K1ZTP	BobL	Framingham

Again, we would like to thank Ray Dick, WA1DPZ/WA1HDQ, for the above information. Also, if anyone is interested, Ray has various items of general interest for the beginner. His address is: 6 Herbert Road, Arlington, MA 02174.

That's it for this month. Let's have some operating info.

73, ES CUL, RG

D X continued

Continued from page 13

has been quite active again at about the same time. Zip is setting up a new final and hopes to be louder to all points in the near future. Zip wonders why there is no activity on Ten anymore as he is usually on that band on Sundays looking for contacts.

The maritime mobile station we mentioned last month SL7AY/mm has been visiting Gulf ports recently and was at Houston, Texas when last heard. Some of the ham operators aboard are SM7CFP, SMODFP, SMOBRV, and SM7EQF. That's a lot of Q R M on a small ship. The cruise started in November, 1968 and they will be back in home port in April.

Some time ago we mentioned that Roger, G3LDI was working on a possible RTTY DXpedition to Sealand, a country within a country, over there in England. Roger now reports that the thing is definitely off for two reasons. First, and I guess most important, is that the owner of Sealand will not allow anyone to visit the place, and second, the DXCC committee of the ARRL will not recognize it as a new country. We all certainly appreciate Roger's efforts and it would have been a real "first" for RTTY had he been able to pull it off.

This month we are pleased to see one of the DX stations receive the W A C Award. Our congratulations go to --

Nr. 119 Hans J. Schalk DJ8BT

Hans made all the contacts and managed to get all the Q S L 's in 1968.

Well, as the length of this months column indicates, there has not been much activity to report. Hope things pick up in the coming weeks as we finally say farewell to Winter and welcome Spring in these latitudes.

Good Luck in the Contest(s).

--73 de John

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Check Your Renewal Date

Please check your address stencil for renewal date. The month will be abbreviated and the last figure the year date. ei . . . Jan 9 0 means your subscription expires with the January issue 1970. Where there are several numbers the last or highest number is the last digit of the year.

RTTY-DX

JOHN POSSEHL - W3KV
Box 73 Blue Bell, Pa., 19422

Hello there. . . . .

It seems that we just finished the previous months column and here we find that it's time to get another one off to Dusty. The fact we were somewhat late with the last one and February being a short month accounts for it I guess.

The highlight of RTTY activity last month of course was the "Giant" Flash Contest which covered two operating periods of eight hours each on the 15th and 22nd of February. Unfortunately we missed the first session and although we did make the second it is a bit difficult to give a comparison on conditions for both week ends from this location. The opinion of the west coast USA boys was that the second week-end was better for them as conditions to Europe were quite good. Activity seemed quite brisk and the three higher frequency bands all had their share of Q R M. It was amazing how strong the stations from Europe were on Ten Meters at this Q T H, particularly the Q R P signal from SMOKV. Olle had the "S" meter pinned at 60 db over nine here.

As contests go, I imagine that many found it quite refreshing to be able to sit at the rig for several hours, make many DX contacts, and then shut things off with the feeling that you had been in a sprint race and not a marathon. The short exchange consisting of five numbers helped a lot too, particularly in Q R M conditions. There was little time lost in making endless repeats.

The perennial contest operators such as W2RUI, DL1VR, and ON4BX were on the bands as always. It was also quite good to hear Alec, G3MWI on again as we have missed his signal for a long time. A new station came on toward the very end of the contest. Juan, XE1IW, at Guadalajara had just become active on RTTY and it must have been quite an experience to be called by so many stations the first time on the band. Fred at HR2AFK was quite active too and gave many of the contestants a new country. The highlight here was a contact with VK2FU via long path five minutes before the contest ended.

The Annual Spring B A R T G Contest will have been over by the time you read this and we hope to have a report on activity in the next issue. Keep in mind that if you work 25 countries in this contest you can apply for the QCA Award issued by the B A R T G without going thru all the bother of sending in the QSL's. Send the necessary log information along with $1.00 to--

Bill Brennan, G3CQE
Sea Kiwi, Tower Hill
Williton, Taunton
Somerset, England

The details of the DARC- WAE RTTY Contest appear this month. This is a new contest with a different feature as reported last month. Keep in mind that you can add up extra points by taking advantage of the "QTC" message.

Arthur ON4BX, reports a new station on from Belgium. Gaston, ON5DG, has just become active and is very interested in making DX contacts. Gaston will also be active in the contests that are coming up so watch for him.

Two new stations have also come on from Hamburg, DK1EP, Tom, and DL2EP, Uli. They are brothers and share the same station so if you are looking for prefix the chances are that if you work one you can immediately work the other. They are active on 15 and we were pleased to be their first state side contact on RTTY.

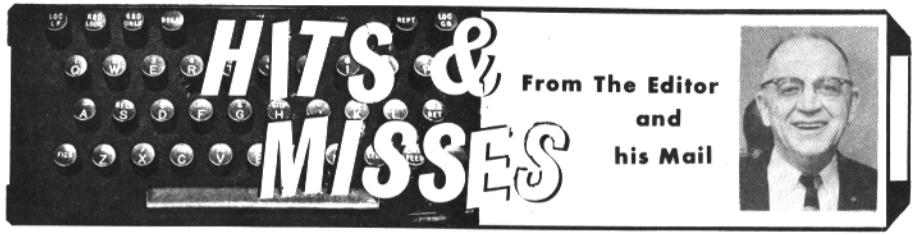
Henry, CE3EX, is active again after an extended vacation with his family. Henry would like it known that the Call Book QTH for his call is entirely wrong and direct Q S L cards should be sent as follows--

Enrique Claude, CE3EX
Avenida Lyon 990
Santiago, Chile

You can usually find Henry active at around 2300z on 14 mc.

A little further to the north Zip, OA4BR

Continued on page 12



Just about the time you read this, Crys and I will be in Ft. Lauderdale, Florida, hopefully in the sun. Although our mail will be picked up nothing will be done until we get back after the 1st of April. Then all hell will have to fly so we can get the next issue out on time and be ready to attend the Dayton Hamfest, April 25-26. All this means is that our usual slow response to correspondence will grind to a halt until we catch up. We will keep up with all renewals however, so keep them coming.

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Speaking of renewals, it helps us when you mention "renewal" and give us your call. Surprising how many checks we get with no information enclosed at all. First we have to search through that particular call area for the name, our files are according to call areas and calls, to see if it is a new subscription or renewal and if we find no record we assume it is a new subscription, if for some reason the address has changed to another call area, we are in trouble. Actually about 80% of our time spent on the Journal is keeping records and about a quarter of that time is spent tracking down subscriptions or renewals with insufficient information. IF we ever get a chance we will rearrange our files to an alphabetic one with names only, in the mean time your help with complete information will be appreciated.

And again speaking of renewals, we came home one night with a stack of mail and Crys asked, "anything interesting?" and we replied "nothing but money". We have never quite lived that down. Not that we are allergic to money, but what constitutes interesting mail" to us are articles or items to fill the Journal for the people who pay the money. So far we have been very fortunate and hope you keep them coming. We can not use them all but we sure appreciate the time and effort of those that contribute.

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Last month we printed a petition filed by Keith Petersen, W8SDZ, with the FCC to permit higher operating speeds on RTTY. We know from our experience with narrow shift that a great many are going to say "why create confusion, we are on one speed now and why change?" Read the petition again. The reasons are many and should not effect those that want to stay put. Incentive licensing was put through as an attempt to increase the versatility of amateur operators with a penalty for us oldsters that are content to enjoy our hobby without becoming electronic experts. If some of the fellows on RTTY want to experiment with faster and more efficient communications we feel they should be encouraged, whether we like it or not, progress is daily occurrence. If we personally don't want to experiment why not let others, who knows what may develop. Then maybe we can jump on the wagon for a free ride. The ARRL board of directors meets in May, tell YOUR director you would like to see the change - or if you don't like it tell him that. But tell him SOMETHING, RTTY operators have too long been ignored simply because outside of our printers we have made no noise. . .

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RTTY JOURNAL
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NO GLARE WINDOWS for Model 15 & 19 Printers. Cadinum plated & Gold iridite finish. $12.50 P.P. Check or M.O. Bud WA6UEF, 17114 Sunderland Dr., Granada Hills, Calif. 91344.

RTTY GEAR FOR SALE. List issued monthly. 88 or 44 mhy toroids-5 for $ 2.00 postpaid. Elliott Buchanan and Associates, Inc. 1067 Mandan Blvd. Oakland, Cal. 94610.

QSL CARDS FOR RTTYers - Special designs 100 3-color $3.50 ppd. Mail 25¢ for samples, will be deducted from first order. W8LMQ PRINT, 6344 Dubois Detroit, Michigan 48211

TYPEWRITER RIBBON REINKER, Hand operated model now only $3.00. K575 or K764 Ink available at all National Cash Register Co. stores at 75¢ per tube. Walter Nettles W7ARS-8355 Tanque Verde Rd. Tucson, Ariz. 85715.

DAYTON Hamvention April 26, 1969: Sponsored by Dayton Amateur Radio Association for the 18th year. Technical sessions, exhibits and hidden transmitter hunt. An interesting ladies program for XYL. For information watch ads or write Dayton Hamvention; Dept. R., Box 44, Dayton, Ohio, 45401.

CUSTOM-MADE TT/L-2 FSK Demodulator complete with 850 and 170 shift filters with/without scope indicator. ST-3 with AK-1 AFSK complete wired-tested ready for operation. Mainline TT/L-2 filters. Licensed Engineer Lab Equipment. J*J Electonics, Communications Specialist, Windham Road, Canterbury, Conn. 06331

SHELF TO HOLD aux. reperf or TD on #19 set (above regular TD) $9.00, with jacks and AC junction box. #32 stand w/feet $11.00. Both used. List free. Gordon White, 5716 N. Kings Highway, Alexandria, Va. 22303

WANTED - Teletype clock that sets up the time of day in teletype code, sometimes known as a 1-CL Timer. Al Windhorst, W9ZGC, 53166 Twyckenham Drive, South Bend, Indiana 46637

GLASS HOUSE HAMS; Compiling a directory of hams employed in the glass container industry and allied fields. Send information to WB2AHF, 1197 West Woodcrest Dr., Vineland, N.J. 08360

NDX-5 Transceiver, NCX-A Spkr. Pwr. Supply both for $450.00 in excellent condition. Will consider CE-20A trade in. K7GCP, 99 North 800 West, Orem, Utah 84057, Ph. 801-225-0678

FRXD COMBINATION (typing reperforator and transmitter distributor) with synchronous motor. This is an exceptionally flexible unit combining reperforator, a reader and distributor on one base. All three units can be used separately or together, taking the place of reperforator and trans-distributor. Used with a model 15 page printer it will provide all of the functions of a model 19 with much more flexibility. See Feb. 1964 CQ for schematic and additional information, used, good condition. $32. ea.

LO-15 Teletypewriter send - rec. Mfg by Lorenz Corp. for Interlex and Teletype Corp. Most parts interchangeable with model 15. Teletypewriter European standard 65 wpm. This machine is a much later model than the model 15. Has a nice touch, quiet and smoother than the 15. Beautiful light green color, keyboard has white keytops. Excellent running condition, parts available -$80. each With Here -is attachement on keyboard add $10. Set of 60 wpm gears $5.00 Steel table with electrical box matching color, $15. each.

4X150a TUBE - unused $14.50 ea. Model 14 typing reperforator, send rec, with end of line indicator, keyboard and retainer, excellent $38.50. Model 14 typing reperf, rec. only with synchronous motor, holding magnet and retainer excellent, $28.50. Transmitter Distributor Model 14 with synchronous motor. Like new, $18.00 ea. FRXD or FRXD-20 combination trans - distributor - reperf, sync. motor. Used with model 15 it will provide all the functions of a model 19, with much more flexibility, excellent $32.00 ea. FOB Brooklyn. Send for catalog on teletype parts and equipment. Atlantic Surplus, 300 7th St. Brooklyn, N.Y. 11215

TOROIDS 88 and 44 mhy, center-tapped, never potted, 5/$2.00 POSTPAID. Teletype 32KSR complete page printer, excellent working condition $300. Model 15, working $85. Model 28KSR complete $400. Johnson KW matchbox with/SWR $120. Hallicrafters SX-101A receiver $160. B & W 5100B and 51SB sideband rig $145. Page printer paper $6/case/12. 11/16" oiled reperf tape $3/box/10. WANTED: Back RF covers for Measurements model 80 signal generator. Hi-band and UHF FM equipment. Sideband Tranceiver. Stamp for list. Van W2DLT 302R Passaic Avenue Stirling, N.J. 07980

FOR SALE: GENERAL COVERAGE receiver, Hammarlund HQ180, Like new condition. $225.00. E. Shafer, W8MSG 3479 Kersdale Road, Cleveland, Ohio 44124

Additional Classified on Next Page