RTTY

WOBP

SILENT KEYBOARD

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NEWS OF AMATEUR RTTY

JULY, 1959
25 Cents
Vol. 7, No. 7

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: 1.6 henry toroids "Q" 150
Dick Hinz 833 7th Ave., Sacramento, Calif.

WANTED: Tech Manual CHZ-60170 RF Monitor, part of OCT-2 or OCT-3 .... WØOKH

WANTED: Model 62 .... W5OUW

FOR SALE: Model 26, Gates Converter, G.E. IF Converter W6EHZ

FOR SALE: Model 26 and Gates TU W6WOC

WANTED: Model 15 typing unit and cover, Model 14 typing or non-typing reperf, and transmitter distributor K8MPU

FOR SALE: Teletype repair parts and service W2ZKV
W6EV
W9GRW

FOR SALE: Model 26 with TU 70.00 .... K6HMS

FOR SALE: Bound 1958 RTTY $5.00
Call Books $1.00 .... RTTY

FOR SALE: FRR-3-A with AFC panel for FGC
$200.00 .... W6AEE

FOR SALE: 0-5B/FR exciter modified for VFO and Xtal . . . $75.00 .... W6AEE

RTTY, Inc.
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372 WEST WARREN WAY ARCADIA CALIF

=WE HAVE JUST RECEIVED CONFIRMED WORD THAT BOYD PHELPS WOBP AND ADOLPH EMERSON WOITQ WERE BOTH KILLED IN AUTOMOBILE ACCIDENT 6-15 IN MEXICO WILL WRITE YOU FURTHER DETAILS=

R FINCKE KOAK=

June 24, 1959

Dear Merrill,

It is with a heavy heart that I write you this letter. I learned last Sunday of the tragic accident which took the lives of Beep and Adolph. It is still hard to believe that they are gone from our midst, and we join you and all the RTTYers and amateurs all over the world in sorrow and grief over their untimely passing from the scene.

We had enjoyed a visit with Beep and Adolph several weeks ago (May 26-27) on their trip down to Mexico, they stayed here overnight. We tried to get them to stay over a few more days, as we had so many things to talk about, but they were anxious to get to Reynosa by Thursday, so they left with the promise that they would be back on their way back to Minneapolis. It was the first time I had had the opportunity of meeting Beep in person, after talking to him via the "long yaller" for several years, and it was a real privilege to visit with him. He was the epitome of friendship and keen wit and humor; and Adolph, WØITQ, was a fine, kind and generous soul also. We all know that Beep's departure is going to leave a big breach in the RTTY ranks, that will be impossible to fill. The enclosed copy of a letter from Erosa was received here a week ago today and, am sending it along for your information, although I do not know what the present status of the expedition is—whether Erosa plans to carry thru with his plans in view of the recent tragedy. I feel badly for Erosa, and have written him a letter, as I know he must be feeling a deep shock from the news of the accident. WØ-IJG last night was quoting to me from the Minneapolis paper which carried the news of the tragedy that it occured just north of Mexico City, on a narrow winding road. They were going up a hill, and going around a curve where they met a truck head-on, who was on the wrong side of the road. You probably have been filled in on the facts already, Merrill, but the Mexican Custom officials had requested that they return the two Model 15 printers to the border custom officials for proper evaluation and custom clearance, so they probably had the machines in the back of the sation wagon with them. I had contacted Beep twice, June 4th and June 6th, operating from Erosa's home as XEØBP, and received an XEØBP QSL card from him just about the time the accident must have occurred. Beep had taken along the Mu-Western Converter at my request, and was using it, and said he was very pleased with the way it was working.

Nothing much to add here, Merrill. Perhaps I will catch you on the air some evening for a ragchew. I joined the ATC MARS recently, and it keeps me kinda hopping. Also have the KY-58/GRT Keyer fitted out with Xtals for both MARS and 40 meter frequencies, and it works fine. Beep had also acquired one which he had modified somewhat, and we had a great time swapping notes on equipment. We are all going to miss the Beeper.

73, Merrill, and the best to you and yours. Hope to hear from you soon. SAM, W5TVG

June 24, 1959

Dear Sam:

It was terrible for me to receive that very bad news! I didn't know and the first paragraph of your letter was really a shock. I received it along with an DX Bulletin of OVARA and what I did first was to read the bulletin, which had some news about our DXpedition and a *facsimil* of the QSO between XEØBP and WØFUH of Denver . . . it calls Beep the "top authority on amateur radio teletype matters in U.S.A." After I read it, I had to go for planning of DXpedition and considered your letter of no more importance and begun reading it in the street . . . it was very bad news and I don't lie to you when saying that I had tears in my eyes . . . I came back to give it to my father, first, and the same impression I received was his; my mother and my sisters, my wife participated of our feeling; there has been crying to Beep and Adolph, two gentlemen who came to Mexico to make friends, and they did; our only feeling in the time that they were a part of my family was that they feel as if in their own home. Please Sam, try to know the more of how it could happen, in what place, the date; it is of the more interest to me and my family as we really appreciated to these hams; I would try to write to Mrs. Phelps and Mrs. Emerson to express them the feeling of our hearts, as soon as I come back from Socorro. I went shopping with Beep and Adolph and they bought gifts for the mother and for the wife of Beep's (two "rebozos") for the boys some articles of leather, for the girls some silver bracelets and key-holders; and for Beep's shack some ashtrays . . . Beep's had also bought three rats (of imitation) to give some jokes in the RATS meetings. I, and my sister to marry, received souvenirs from Beep and Adolph the night before their departure.

Beep's and Adolph trip to Mexico had many troubles; I tried to clear in advance as many as possible, but at the last minute the Reynosa custom received the visit of the main chief, and they had to make a detailed list of the articles for demonstrations and guarantee the import duties . . . when they were ready to go back to the States, they make the offer to the League and to me, of one teletype each, but because of the list in Reynosa Custom, they had to take back the machines and from Hidalgo, Texas, or from Galveston they would make the shipment; as the machine I had from Cuevas Medina, XE1XX, was not in top-condition. Beep gave me the one he had been using, to take to Socorro and the one that was my gift, and he took the one of XE1XX . . . Please, Sam, I ask you a favor: try to get for me one model fifteen, in good condition, black cracked paint in the cover, any motor, governor or sync; I want to have Beep's machine as a remembrance of him and Adolph; If not possible that machine will have to go to Luis XE1XX, who has a radio shop, and who will sell it to a non-ham; business is that, and he can not loss the price he asked for it; I have not talked to him about it but I think that he will not be opposed to make that.

I saw your converter and it was used by Beep's the first nights as the one made by Adolph (combination Gates and WØHZR) didn't work at first. As I said before, they had to make a detailed list of the equipment, so they had to take everything back to Reynosa . . . Sorry, Sam, I understand that many times it cost more to one to lose a friend, than one's goodies. I can not do anything by now as I don't know anything about the accident . . . don't know even if it was in my country or across the border. Please Sam, don't forget to write me as much as you can of our mutual hams-friends and their last moments . . . I have many, many things to tell you about them, his jokes, their worries while in Mexico, all their little things that make them happy, as our rag-chews and the celebrations of each new-state with "tequila;" the signing of the book of visitors in Cuernavaca by Beep's complete with call-letters . . . too many things . . . too many to remember; to Adolph I heard some poems of Kipling, and his remembrances of Scotland . . .

Sam, Beep gave me some photos of his shack and the three ones I am sending you; he made two of each and he took one set with him; when packing he throw to the waste basket the negatives so I have it and I was sending them to the family, but I will do it when I come back from Socorro, as I want to make some amplifications to have in the "Beep's room" as all my family says now and before to the room where XEØBP made QSO's with 20 states, 4 countrys and 8 call zones; where he made the first XEØ to XE1 (XE1UNM); the first CE-XEØ (CE3AGI, S. America the only

continent he needed to make WAC in RTTY!) and the place of the first XEØ in RTTY in Mexico. I also have a shirt of Beep that was not ready at the time of departure . . . also have some 15 cards from XEØBP ready to mail but it seems best if I have them with me and await for the asking of interested people, they confirm QSO's but the addresses of the call books are wrong sometimes and that card is very valuable, please give me an advise on it, Sam. The card to CE3AGI was not given to me as Beep' said that "Dave" will write him to Minneapolis, and then Beep will send it . . .

Sam, I am going to Socorro and will leave Mexico today in some hours more, now it is 02:00. Answer me soon, but address the envelope to my sister; Adda R. De Herrera, same address; so my fathers and family will know of our friends. Also write to Al, XE1ZZ, who will try to have some news from the authorities (add.: Sierra Paracaima 1,130 Lomas, Mexico City, Mexico.)

Best 73's XE1BI

This is AF5ANW in Houston transmitting tonight . . .
The date is June 23, 1959.
RTTY QST DE AF5ANW/AF5TAF in Hous-on transmitting on 7.3Ø5 MC.

This is one of a series of news transmissions to the MARS net. These tapes are prepared by Bill Carter and transmitted either by AF5ANW (Bill Carter) or AF5TAF (Mac Brumby) on Tuesday night.

The Eleventh National ARRL Convention was held last Friday, Saturday and Sunday. The convention headquarters in Galveston, Texas were the New Moody Convention Center, the Galvez Hotel, and the adjoining Buccaneer hotel and Galvez Villas. Amateur radio operators from all parts of the U.S., Canada and Mexico were on hand to exchange ideas and see each other in person. Equipment manufacturers had the latest equipment on display and the MARS ATC had a very nice display of RTTY gear.

The only unhappy note was the news that Boyd Phelps and Adolph Emerson (WØBP and WØITQ) had both been killed in an automobile accident at Zimapan just north of Mexico City while en route to the Galveston convention.

Boyd (Beep) was to have made the principal technical talk at the RTTY session of the convention.

Details of the accident are still not available but XE1GE has supplied the following information: . . .

The two hams had driven to Mexico City from Minneapolis to deliver a gift of two model 15 machines to the Mexico City Amateur Radio Club.

They had arrived safely and had set up and operated the equip. under Boyd's call XEØBP but because of Mexican legal requirement were requested to return the machines to the border for proper import permit and release.

XE1GE and his XYL were to have traveled with the pair but because of the requirement for return of the two Page printers to the border no room was available in the automobile for them . . . They (XE1GE) and XYL drove thru to Galveston the next day and did not know of the accident until they arrived at the convention.

Fred Schnell gave the key talk at the banquet on Sunday and as usual gave a very entertaining talk.

Fred in his humorous manner detailed the early days of ham radio and highlighted the contrast of today's beginner and the early day radio amateur.

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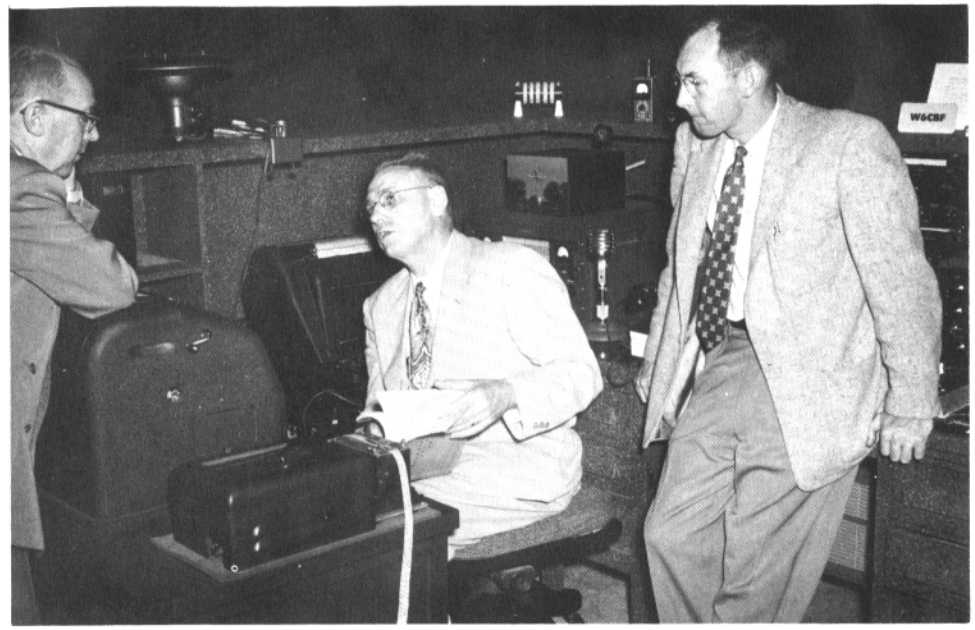

WØBP and W6MTJ at W6CBF

In Memoriam

BOYD PHELPS, WOBP
(1899-1959)

It is with deep regret we report the passing of one of our most ardent fellow amateurs. Beep and Adolph Emerson, WØITQ, were killed in a car accident 15, June 1959 north of Zimapan, Mexico. They were returning to Galveston for the National ARRL convention when the accident occured. Funeral services were held 23 June 1959 in Minneapolis. Boyd's achievements are well known by all amateurs. His activities in amateur radio date before World War One. He was active with Hiram Percy Maximum in the early days of ARRL. His record of RTTY accomplishments covered every phase of Amateur RTTY activities. Building, operating, net control, helping newcomers and many more. His memory and good deeds will be with us forever.

WOBP

NCARTS NR 218 DE W6VPC
Oakland, Calif. 9:ØØ pm June 18, 1959
To all radio amateurs:

DEATH STRIKES OUR RANKS

One of the most shocking and saddening QST's in more than forty years of ham radio was just copied on twenty meters—Quote—QST DE W5ANW W5ANW W5ANW W5ANW AF5ANW AF5ANW AF5ANW Houston Texas. Regret to inform you that Boyd Phelps, WØBP and Adolph Emerson, WØCMQ, were killed in an auto accident June 15, 1959 near Zimatan, Mexico while on the way to the ARRL convention. We regret to advise that the above telegram was received today (June 17th) from Mr. R. F. Finck at the Dallas office of the General Motors Corp. End quote.

Beep, WØBP, was to have given the keynote speech at the RTTY dinner at the National ARRL convention in Galveston which starts today June 19th.

Beep was almost Mr. RTTY himself and most certainly had one of the most outstanding records of accomplishment in ham radio, having received his first ticket, 9TT in 1911 with many, many others between his currently held ticket, WØBP and the last call he signed, XEQØP from Mexico City.

To all who have read, "Two Hundred Meters Down," realize that Beep made one of the first trans-Atlantic contacts and was awarded Gold Medal at the Radio Amateur Convention in Chicago in 1933 for most outstanding pioneer development of short waves below 2ØØ meters.

Beep's love and life were communications, having served in World War I as radio operator and instructor. In WW Two, command of navy radio schools, Commander USNR. Had the first public TV and pioneered ham TV with construction of a ham TV back in 1928.

It is to men like Beep that we owe the advancement of ham radio for, with his work with Himar Percy Maxim and others of that type in ARRL for many years, his tenaciousness in demanding that the rights of the amateur be respected, his work and foresight in regulatory matters with the FCC has preserved for us the many liberties we, as ham operators, enjoy today.

As he lived — he died — thinking of and working with those he loved. Possibly the last QSO he had was with Nick, W6VVF, former president of NCARTS, of which Beep was a member, Beep operating XEQØP in Mexico City last Sunday, June 14th worked RTTY with W6VVF. This tape will be published in RTTY as our salute and farewell to one of the finest and most loved men of ham radio — Boyd Phelps, WØBP — XEØBP Buck, W6VPC

— 0 —

Boyd Phelps was almost Mr. Amateur RTTY and his unfortunate death will leave a place in RTTY which probably never will be filled by anyone. Boyd was to have given the key talk on RTTY at this convention on Saturday afternoon.

The Tech Session will proceed as Boyd would want it to do under the direction of his fellow RTTY hams.

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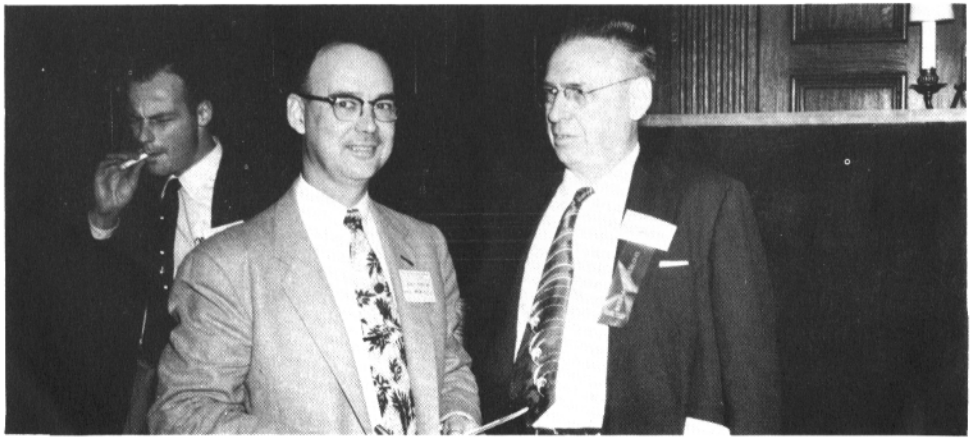
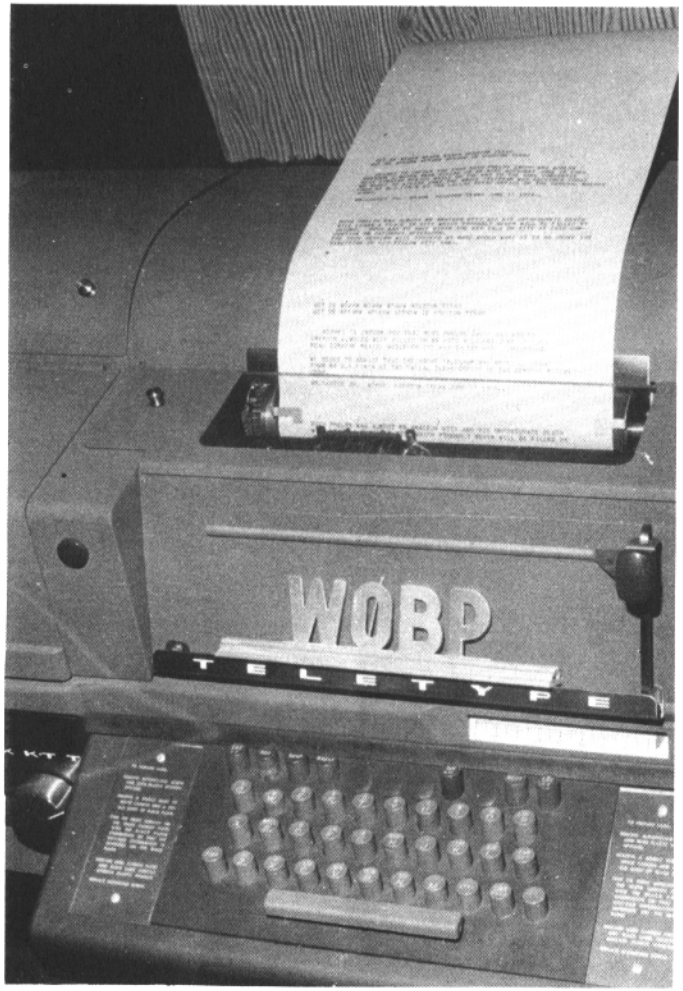


W6CQ1 WOBP

RTTY DEMONSTRATION AT ARRL CONVENTION

GALVESTON, TEXAS



Switching Simplification with D-C Hubbing

JIM HAYNES, K5KIB

At present there are two schools of thought as to the proper way to interconnect printers, keyboards, and things like that there. These might be classed as the DC looping school and the AC hubbing school. In DC looping, the keyboard, selector magnet, signal converter, and transmit relay are all connected in a series constant-current (?) loop, with local copy being obtained in the loop. Alternatively, the keyboard might key the frequency shifter or relay directly and the printer be connected directly to the converter, local copy being obtained by monitoring the transmitted signal. The latter arrangement has the advantage that the actual output of the transmitter is monitored, while the former has obvious advantages if it is desired to transmit and receive on different frequencies. In either case, the signal converter is more-or-less a part of the receiver, and th handling of TTY signals is in the DC loops.

In AC hubbing operations, the signal converter is associated with the printer and an AFSK oscillator is permanently connected to the keyboard. Local copy is obtained by feeding the oscillator into the converter, and the FSK oscillator is then operated either from the converter output or from a separate semi-converter which is contained in the frequency shifter circuitry. In essence, signal handling in this system is done with the AFSK tone signals.

Let's take a quick look at the relative merits of these two systems with regard to switching capabilities. Some sort of switching problem exists in even the simplest RTTY setup. The man who owns a single printer desires to connect the machine for local loop operation for practice typing and adjustments, and into the RTTY setup for actual communication. It is not at all uncommon for a shack to contain two printers and a reperforator; one printer might be used on an autostart channel, the other for general operating, and the reperf alternately with either printer. Here a tape transmission system is also implied, and this must be switched to one or the other circuit as desired.

Consider in the above situation the roblem encountered with switching the reperforator in DC looping. The simplest way is obviously to use a jack and patch cord system so that the reperf can be connected in series with either of the two printer loops. This is fine as far as it goes, but it is often desirable to control the switching with a single switch or relay to eliminate the patch cord; if any form of automatic reperforator control is used this is mandatory. To perform this feat a four pole 3 position switch, or two 5 pole double throw relays are required, for to connect the reperforator it is necessary to first open one of the loops with one switch section and then connect the reperforator across the open with another. This takes four poles for the two loops; with rleays an additional set of contacts is required to prevent both relay from operating at the same time(and perhaps to sound an overflow alarm should they attempt to do so). If the reperforator is to be switched among three or more lines, the patch cord system still is adequate but the relay or switch method is fantastically complicated! This complication is the result of the fact that with looping the circuits and machines must all be connected in series; printers simply will not tolerate being connected in parallel since this splits the available current and louses up the time constant something awful.

AC hubbing offers some solution, and creates some additional problems. Suppose that each printer and each reperforator is equipped with its own signal converter. Switching can then be accomplished by paralleling the signal converter inputs, and a single deck rotary switch could connect the reperforator to any of a dozen or so printers. On the other hand, this method requires a lot of signal converters, and this is its chief disadvantage. First of all, signal converters are expensive and big. Second, no two are alike, nor should they be. VHF operation with weak signals in white noise, and HF operation with strong signals in heavy coherent QRM require entirely different types of signal converters for satisfactory printing quality. This means that the converter used with the reperforator in this example must be some sort of compromise, and will not give as good results as the specially designed converter.

This is very bad, for a reperfed tape which is not almost letter perfect is practically useless; in message relaying it would be much better to retype so as to eliminate the more obvious errors. This wastes time and defeats the purpose of having a reperforator in the first place.

TABLE I

System—DC looping
Advantages—Low cost; less equipment required.
Disadvantages—Switching complication
System—AC hubbing
Advantages—Switching simplicity.
Disadvantages—High cost; necessary compromises; much equipment required.

At this point a compromise between the two systems appears desirable; something that will have the simplicity of AC hubbing but will not require all of those signal converters and AFSK oscillators. Such a desirable compromise appears to be DC hubbing.

Most modern signal converters use a keyer tube to operate the selector magnet of the associated printer. This tube acts as a voltage/current amplifier and relay. It is driven from a voltage source—the grid requires little or no current for operation. Its output is an on-off current signal through the magnet winding—a constant current circuit is desirable for good time constant.

In DC hubbing, this keyer tube is removed from the converter and connected permanently to the printer. The keyer circuit itself is simple, low in cost, and of course doesn't care what kind of converter design is used ahead of it. Switching is done in the grid circuit of the keyer tube. The grids of two or more keyer tubes may easily connected in parallel; thus switching among printers can be done with a simple single wire system. Obviously, a zero or slight positive grid voltage must be used for mark and a negative cutoff bias voltage for space.

Keyboard connections are equally simple. With the circuit arranged to connect a negative voltage (supplied through a high resistance) to the keyer tube grids at all times, the keyboard can simply be hung from grid to ground and will key the printer for local loop with correct polarity. Since the keyboard circuit is normally closed, keyboards cannot be connected in parallel or a steady mark would result, but this is no serious difficulty. There is simply never any reason to connect two keyboards in parallel, for it is obviously impossible to send from two keyboards to one circuit at the same time. Here again a simple single-wire switch can be used. Thus DC hubbing permits simple switching without tying up expensive signal converters and AFSK oscillators.

This system has several other advantages for experimental applications. For one thing, diversity operation is easily accommodated, since the logical place to combine diversity signals is at the keyer tube input. For use with transistorized equipment, the keyer tube may be controlled with a common transistor capable of withstanding the 40 volts or so of keyer bias. Transistors do not lend themselves readily to direct magnet keying, since few of them are able to withstand the high magnet circuit voltage necessary for good rise time, the high magnet current, and the back e.m.f. kicks caused by the magnet inductance. A PNP transistor can be connected to the keyer grid directly; collector to grid and emitter to ground. The transistor is forward biased to raise the grid voltage to nearly zero and reverse biased to allow the grid to fall to cutoff. For polar-relay addicts, a flip flop can be added ahead of the keyer grid to give the "toggle switch" action characteristic of polar relays.

At this point, it should probably be mentioned that the ONLY place to connect the selector magnet is in the place circuit of the keyer tube and NOT in the cathode circuit. Skeptics are referred to W4EHU's very excellent commentary on the subject in RTTY, complete with differential equations. Need more be said?

This writer over a year ago designed a small DC loop switching system for the station at W5YM; this system is highly automated and uses some 75 relays! A DC hubbing system is now in the design process; compared with the earlier system its advantages for ease of design and flexibility are overwhelming.