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Tech. Manuals

I'll buy them, or I'll trade for ham equipment, whatever suits you best... Tom...

TOM HOWARD - WIAFN

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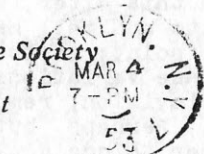
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Teletype Bulletin No. 20

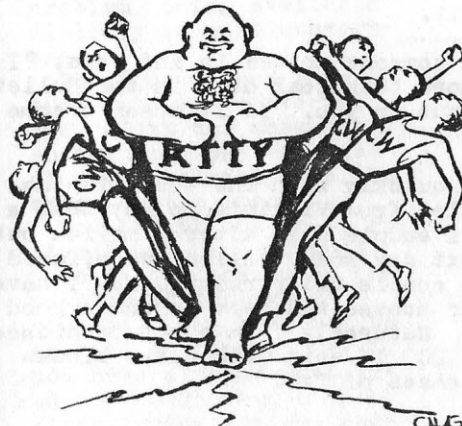
AMATEUR RADIO TELETYPE SOCIETY

Well, we're on the air! I understand that the going on 40 has been difficult at times, though 80 is usually quite calm. The activity has been considerable below expectations so far, but it may build up soon. I have a KW on 80 and have worked ten stations. There were two five-way round-tables with just about solid copy from everyone. More on this will be in order in the next Bulletin when more than fragmentary reports are in from the outlying districts.

Stations Reported as Active:

W1BGW	W2MYL	W4FJ	W6ITH	W8DLT
W2JAV	K2WAN	W4OLL	W6OWP	W8RMH
W2NSD	W3ERS	W4SQF	W6RZL	W9TCJ
W2PAU	W3LMC	W4VMS	W7VS	W0LHS
W2PAT	W3PYW	W6CMQ	W7LU	VE3AXX

We were all saddened by the death of Leo Shepard, W6LS, one of the early pioneers of RTTY, who had much to do with the large number of active stations in Southern California.



"That Monster RTTY is loose in our bands," cry those who would slay the new dragon in order to gain importance. "Teletype will crowd CW out of all the low frequencies unless it is stopped right now!" they chant.

Fear and understanding cannot co-exist, they are opposites. Our task is to deflate the Monster before they slay it.

CALLING FREQUENCIES: Some of you, for reasons best known to yourself, may not be operating under the calling frequency principle. When I am looking for a RTTY QSO I tune to one of the calling channels and listen for beedel-dee-deeps. I also check five kc either side to see if a group has moved off the channel to leave it open for others. I do not tune the band and look for RTTY signals as a rule. And please, when you have established contact with a station, move off the calling channel five kc so it can be used by others. There are a lot of RTTY stations now and there will be many more, leave room.

Now that many of you have had a chance to sample the calling channels what do you think of them? How about letting me know how they are working out for you. I have listened to 7140 quite a few times and it has sounded pretty clear of QRM. 3620 is another story. I am beginning to think that there was a very good reason why none of the ARRL nets were set up for that frequency. When the long skip is in, and it usually is at night, there is a broadcast phone station on the channel which does not seem to aid me in TT reception. Do you hear it too? Shall we move? If so, where to? Let me know and I will set a date for changing to a new frequency.

W2MYL, Graham Claytor, now has a model 26, but it has the fraction type keyboard. Wonder if any of you telephone men can get the regular type pallets for Graham for those few keys which are different?

W4MOP, Stew Haag, has been corresponding quite a bit lately and even called on the phone the other night for a fine chat. Stew now has a model 26 and converter and should be in there with us on the l.f. soon.

W6HWW, Ernie Hammer, just got a 26 from W6OZE. Traded him a couple model 12's, an SCR-211, and a 1016 recorder for it!

W9UAU is all set for FSK now, and even has his tape ready, reports W9TCJ, after a visit.

CHIP-CHIP: Every now and then someone writes in and says, "I don't see why you don't put more technical dope in the Bulletin." Hmmm. I'm not holding out on you. If it doesn't come in it doesn't get into print.

My search for 4D21's ended quickly with the squib in the last Bulletin. Deacon called from Virginia to say that a pair were on the way just a couple days after I mailed out the Bulletin. Then the next day W6HWW called and offered another 4D21 in swap for a couple polar relays. Now I have three of those little power houses and hope to put a good two meter signal out soon. Naturally I am a bit trepidacious since there are over 1200 TV sets within two blocks of me. Just imagine 1200 cases of TVI!

W9IAY, George Lockwood, found some 21A's with just a relay missing which had been sold for junk. Any of you fellows out near Chicago that are interested in one he has 'em, and may, by now, have some tape transmitters too; cheap.

MARK HIGH: After a few days of operation on 80 I notice that some of the gang are sending space-high instead of mark-high. This is confusing when there are three or more in a round-table. Why be difficult? Send mark-high. Another suggestion is this: Send the c.w. identification on the space frequency and then give at least ten seconds of mark so that the receivers can be adjusted for any drift of your transmitter or their receiver.

W9TCJ's remote receiver tuning deal as described in the April '52 CQ suddenly is of great interest and seems like a must. With this method of tuning the receiver from the typing position and the magic eyes to tell you when you are perfectly tuned things should be a whole lot easier than I have found them so far.

ARTT 4009

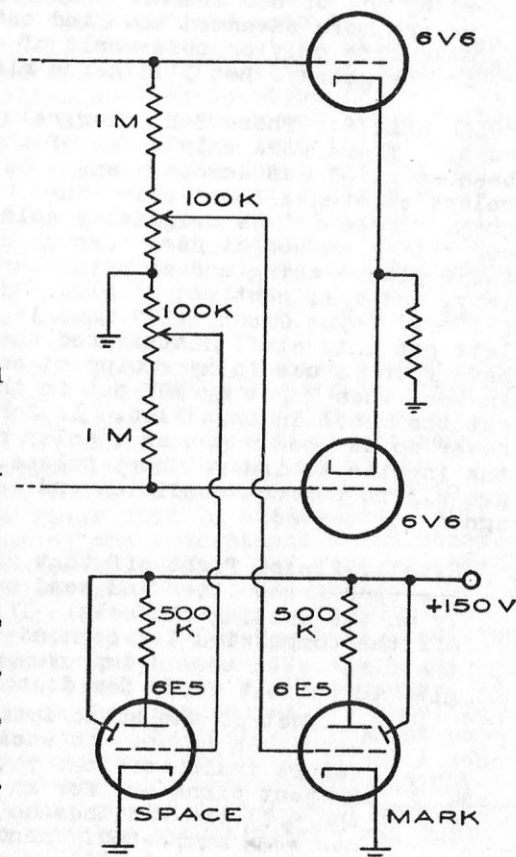
FSK Tuning Indicator
W6NRM/W9TCJ

With this extremely simple indicator you can tune in any FSK signal instantly without even listening to it! All it takes is two 6E5's, two 1/2 meg resistors, and two 100K pots.

The polar relay amplifier grid load resistors are disconnected from gnd and the pots placed in series. 150 volts is no problem, being available directly in most converters.

To adjust, feed a mark tone into the converter and adjust the mark pot so that the 6E5 eye just closes completely. Do the same for the space.

Now try it out on an FS signal and be astounded! This is the answer to the problem of tuning FSK signals. The eyes may be mounted on the printer if you have already installed the W6NRM remote receiver tuning system, described in April '52 "CQ."



W9TCJ, Bob Weitbrecht, seems to have been the first QSO for most of the W2's, W3's, and W4's that I have worked on 80M; busy lad. Bob had been running schedules with W9THE, Chuck Mitchell (of Kleinschmidt Labs) on 3550 kc at 2 p.m. CST, mark-on for carrier-on. The results were excellent, with 99% copy both ways, the only trouble at all coming from some calculator machines at the observatory which threw QRN onto the line. Bob injected some 2975 cycle tone into his converter from an audio oscillator to bias the relay; Chuck biased his polar relay directly with a bucking current. Distance: 50 M. Bob suggests we use multiples of 5 kc when we move from the calling frequency and I fully agree.

W1NBP, Charles Archibald, has an AP/ANALO panadaptor, converted to 110 ac (perfect condition) which he would like to sell for \$125, complete with instruction book. Anybody looking for one of these delux panadaptors? -- Charles is 45, married, and owns and operates a complete automotive service station. He has a full set of equipment both at work and at home, and even a ten meter rig in the service truck. --- Charles is also interested in the Flying Saucers and says: "I Think that they will never be explained by any of our learned scientists until some time when we are more advanced and find out that the Good Lord didn't make life only on this world of ours. There must be others in the galaxy. Bet I'll get a rise out of this."

POLAR RELAYS: Those S-H polar relays sure disappeared in a hurry. There were only a few of the midgets, wish there had been more. I ran across a small batch of the W.E. 215A polar relays at even a lower price that we have been paying for them. These relays originally sold, I believe, for \$40, still cost \$18 when bought used through commercial sources, cost \$6.50 plus packing and shipping through the VHF Teletype Society, and will cost you \$5 plus 50% postage from me. Send \$5.50 to Wayne Green, 1379 East 15, Brooklyn 30, N.Y. now and lets get this stuff distributed where it will do some good. I have four in use in my equipment now and will have three more in soon when I get my FSK put in the 40 and 20 meter VFO's and get the model 14 installed. As John says, the flip-flop can never do as good a job as a polar relay since it doesn't have the inertia to ignore short pulses. At any rate these 215-A's are all in perfect condition and have just been carefully aligned and tested.

Extoll: Please fight off that strange desire to turn on the tape transmitter and send endless debris, particularly on the calling channels. If you can't seem to fight off the compulsion I recommend a prefrontal lobotomy as the first step toward improvement. The Bulletin will be glad to solicit funds for doctor and hospital bills.

Most of the subscriptions to the Bulletin expire with this issue. An enclosed addressed stamped envelope indicates that yours is one of the expired. Present plans are for at least four more issues of the Bulletin and then no more until the handbook has been completed. Send \$1 for more Bulletins now and any extra \$ will be put toward the handbook.

\$1

VE3AKO claims a first: First recorded instance of a VE being copied by a W on 40 meter FSK. Frank says that W2KLD (must be W6KLD) sent him the copy to prove it. The copy was of the test tape run on 7162 kc RTTY under the call VE3AXX. Seems that VE3AKO, APK, AXX, and RA are working as a group and decided to flip to see whose call would be used; VE3AXX lost.

W4PCT, George Hanna, gave a talk and showed his equipment to the Cincinnati Amateur Radio Association recently, I learned in a roundabout way.

A LETTER FROM JOHN WILLIAMS -W2BFD

With a considerable degree of regularity Wayne, W2NSD, and myself, W2BFD, receive complaining letters from the radio-teletype gang regarding many "angles" of our self-imposed respective jobs. It is perfectly natural and healthy indication that our group is composed of human beings possessing the sacred democratic privilege of the "right-to-gripe." On the other hand we, too, have to blow off steam once in awhile so that we may continue to write "Dear OM" and mean it.

Quite frequently Wayne and I, comparing notes, will wonder aloud why we got into this hectic sort of existence which has so greatly dismayed our families and non-teletype friends. Wayne has the least excuse; he stuck his neck out and actually asked for the job. Being a crusader of the sort that, in the middle ages, would have caused him to ride forth against the Saracens, and having an unshakable belief that amateur radio must not be permitted to degenerate into a mere "rag-chewers Society," a 20th-century equivalent to the checker games around the pot-bellied stove of the general store of our grandfathers' day, he did not hesitate to wade into the job which included "taking on" the collossus of Hartford. Even Wayne did not realize the magnitude of that job.

For myself the excuse is that I did not realize I was accepting such a vast responsibility. There is the fairy-tale that, a few years ago, my young daughter favored and which I was thus forced to recount frequently to her to thwart bedtime tantrums. I like to compare myself with one of the characters of this story who, the tale goes, was forced to ferry any and all across the river styx in his rowboat until he learned the secret of evading the enchantment which bound him. The escape was effectuated by handing the oars to anyone entering his boat who would take them. The hapless individual who even touched a finger to the oars was bound to take over the eternal job of ferrying. Somehow this situation seems to conform to my plight in many respects.

There is no use passing the blame on to W2CFT because, back in 1945, he suggested that the frequency-shift panel I had developed during the war, for a distinctly different purpose, could be used to key a teletype machine. Oh no! A sensible man would have dismissed the idea and no harm would have resulted. W2BFD, not being provided with such keen perception, had to spend a year running around to the various

commercial outfits salaaming to the high moguls of the "Automatics" departments in a vain attempt to secure two (I repeat "TWO") scrapped printers. The matter would have finally died because, discouraged, I had just about given up, but my "Nemesis" in the form of Gus Rinninnsland, a radio friend of many years, continued to nag me about the matter. The irony of the thing is that I plunged into the venture up to the hilt and Gus, the instigator, has time to play with his teletype machine while I wallow in mountains of letters, bills-of-lading, freight notices, etc., etc. Oh! the injustice of it all!

Securing the first printers was mostly a result of fortuitous events. Several years in the old Postal Telegraph Company (rest its soul) as a Morse operator (bet you fellows never thought I could stoop so low as to touch a Morse key, huh!) turned out to be the "open sesame" by providing friends in high places in more than one wire company. Once "signed-up" with one outfit it was comparatively simple to convince the others that nothing would be gained by insisting on the destruction of their superceded equipment. One of the things that went a long way in the convincing was the provision of the "waiver" of commercial intent (a matter that bothered them considerably). Another thing was to eliminate the correspondence that they would have had if they had to reply to each amateur individually. This was where I made my big misstep in my eagerness to "swing the deal." At this point was formed the V.H.F. Teletype Society whose job it was to act as the medium between the communications companies and the amateur fraternity so that the correspondence could be limited to simple lists of names and shipping addresses and payment, and NOTHING MORE! From then on all amateur mail directed to the telegraph companies has been forwarded to the V.H.F.T.S. (Fine for them, tough for me!)

For lack of knowledge, and because of a desperate desire for "anything that would print", the original contractual agreements merely specified that a receive-only printer would consist of a printer and distributor, while a send-receive machine would be composed of a printer and keyboard. There was a verbal understanding that various other items such as tables, relays, covers, etc., were to be thrown in gratis if available at the source of the printer. This went along fine until the commercials began to regret their bargains, and it has become impossible to hold them in adherence to this policy. One of the most important reasons, I believe, is that, despite pleas from Wayne and myself, amateurs insist on writing the wire companies and offering larger prices for printers in order to get speedier delivery. It has not helped the amateur concerned since the agreements state that the VHFTS secures all superceded equipment, but what it HAS done is to cause certain executives to believe the machines are worth more than they were "swindled" into signing for. Although they have not "welched" on the written agreements for furnishing the "basic" equipment it has done a lot to eliminate the items that were "thrown in" originally. Chalk that up to failure-to-cooperate! If any good at all can be seen in this new "per-item" method of purchasing our machines it is in the larger variety of equipment now made available to us (lets not kid ourselves, it is because they now get paid for them). We trust that this will, eventually, cause them to release more modern "Iron Horses" for amateur use. Thus, for the gripers

about the manner of procurement, it has not been exactly a matter of choice with us. Keep in mind that the telegraph people must feel that it is worth their while to deal with amateurs or they will return to their ancient policy of destruction of superceded equipment. The present arrangement keeps their correspondence and bookkeeping costs to a minimum, which is very important.

Then take the hot-headed chap who waits many months for his printer and it arrives, say, with the cover-glass missing. Does he write to the VHFTS to find out that two dozen cover-glasses have been sent to me to distribute in cases like that? Oh, no! He sits down and writes a scathing letter to some bewildered official of the telegraph company who sends it to me with a few comments of his own! Yes friends, we are very human! Also likely to put amateur teletype in a poor position.

I often wonder what my poor XYL thinks of all this. Ham radio and building of electronic equipment I have gotten by with by bamboozling her into thinking that is what happens when one marries an "inventive genius" with great unplumbed talents. She sometimes refers, vaguely, to the day when I will make "my million." I do not have the heart to disillusion her. This is not the case for the secretarial work of the VHFTS. I will never, if I live to be a hundred, be able to convince her that there is anything to be gained by answering hundreds of letters, a few even insulting, spending several hours daily on an unsalaried job, when she knows how I positively loathe writing letters. It is useless to speak of the "great Technological Renaissance" in amateur radio and the need of an organization for cohesion during its infant days. My wife simply asks me why I feel that I am the "Chosen One" to immolate myself on this altar as a sacrifice. Wish some of you guys would write and tell her.

Which brings up another point; maybe some of you have felt that amateurs dabble in these variations of their hobby such as teletype, facsimile, television, remote control, etc., as a matter of interest only. Perhaps, but do you know that participation in these other things could very well be the preservation of amateur radio? It has been demonstrated so many times in the past, when commercials have cast their avaricious eyes on our portions of the radio spectrum, and when international agreements threatened our very existence, that our government would fight for us and our privileges. Why have they been our good friends? Simply because we provided the nation, in times of stress, with a source of operators and technicians vitally needed. With all military and emergency services having such a terrific investment, today, in such things as radioteletype, facsimile, radar, guided missiles, can we still honestly say that amateurs, as a group, have trained themselves in these things sufficiently to be of as great a value to the nation as formerly, when a great number of Morse men were suddenly needed? This is not to imply that all amateurs must immediately convert to RTTY, but merely to that a large enough percentage of us must "dabble" in the technical employment of these things and others so that the next time the very existence of amateur radio is challenged we may have something to offer in exchange for our slice of the cake.