

Radio Amateurs to Assist State Department Sponsored Ninth Plenary CCIR Session

Radio amateurs of Southern California and Arizona, under the direction of Ray Meyers (W6MLZ), S. W. Director ARRL and Chairman of the Amateur Committee, will install and operate a completely equipped amateur radio station at Biltmore Hotel, Los Angeles, California, for the Ninth Plenary Session of the Consultative Committee International Radio (CCIR). This conference of approximately six weeks will start Wednesday, April 1, 1959.

According to the General Publicity Chairman, Phineas J. Icenbice, Jr. (K6VZJ), Engineering Division, Collins Radio Company, Burbank, California, amateurs from industrial and governmental agencies are combining forces to assure a successful demonstration of amateur radio capabilities in this official State Department affair. The purpose of the fourteen study groups of this conference is to study technical and operational problems of international interest and recommend solutions for those problems. Impressions acquired by the delegates as a result of this conference are of importance to all citizens, and more especially those of the amateur radio fraternity. Radio facilities will be available to foreign dele-

gates who comply with U.S. regulations. It is anticipated that thousands of messages will be exchanged with many of the 97 participating countries.

Participating in the arrangements with Ray Meyers, Radio Operations Manager, Lockheed Aircraft Corp., will be Herbert Hoover, Jr. (W6ZH), Special Consultant for the State Department and Honorary Chairman of the Committee. William Grenfell (W4GF), FCC, Washington, D. C., Merrill Swan (W6AEE), Cannon Electric, and Howard Shepherd, Jr., (W6QJW), of the Shepherd and Shepherd Law firm are Vice Chairmen of this Committee.

The Federal Communications Commission and the State Department have assigned and approved the special call letters K6-USA for this event. The operation of K6-USA will provide an opportunity for our foreign delegates to become acquainted with amateur radio in Southern California. World-wide understanding will be furthered by the many contacts with amateurs throughout the world on all bands. QSL cards will be exchanged to verify radio contacts conducted via A.M., SSBSC, CW and RTTY.



Seated: Herbert Hoover, Jr., State Dept;
Left to Right: Lyle Moore, P.T. and T.; George Elsworth, State Dept.;
Ray Meyers, Lockheed Aircraft Corp.; Merrill Swan, Cannon Electric;
and Phineas J. Icenbice, Jr., Collins Radio Company

CONVERSION OF HT-32 TRANSMITTER for TELETYPE OPERATION

Courtesy The Hallicrafters Co.

GENERAL

This suggested method of converting our HT-32 transmitter for RTTY is extremely simple and does not require the drilling of any holes in the unit. The conversion can generally be made in less than one hour.

THEORY OF OPERATION

In the HT-32 the sideband switching oscillators, a 12AT7 tube V4, operate at either 4.05 MC or 13.95 MC, depending upon which sideband is to be transmitted. When either of these two frequencies is mixed with the 4.95 MC SSB signal, the resultant is a 9.0 MC signal at the output of the sideband generator.

To disable either of the two oscillator sections of V4, blocking bias is applied to the grids via certain band switch sections. Hence, if certain bias wiring changes are accomplished, both oscillator tubes could be biased to cutoff. Then, upon keying either tube, an output signal would be present.

If the frequency on one of the oscillators were shifted 850 CPS then, as both oscillators were alternately keyed by an RTTY signal, a frequency shift RF carrier would be had.

It is not important which of the two oscillators be changed in frequency from the factory setting. However, the higher frequency oscillator, 13.95 MC, marked LOWER SB, can be more readily shifted to a

lower frequency with negligible loss of output. Trimmer C130 can be used to accomplish this shift. When the trimmer is moved for RTTY, it must be returned to its original factory setting for SSB. It is suggested, therefore, that a plug-in trimmer, hereinafter described, be employed to obtain the shift.

As additional frequency conversion is employed on 40, 15, and 10 meters, the frequency shift reverses on these bands from 80 to 20 meters. Thus, on 80 and 20 meters, the shifted signal is lower than the indicated V. F. O. dial. On 40, 15, and 20 meters, the shift is higher.

The schematic diagram contained herein must be referenced to the over-all schematic of the HT-32, Figure 12 of the Instruction Book. BS-1R is the reversed side of the band switch wafer nearest the front panel of the transmitter. It is necessary to remove the transmitter from the cabinet to locate the wafer.

PARTS REQUIRED FOR RTTY CONVERSION OF HT-32

- Polar Relay or Polar Key Board
- 3 Conductor Plug (Mallory Type 76)
- 3 Conductor Jack (Switch-Craft Type C55B)
- 2 Resistors (220 K OHM $\pm 10\%$ ½ watt)
- Test Socket Adapter (Peco Model TB S9)
- Ceramic Trimmer Capacitor 1.5 to 7 MF NPO (Erie Resistor Co. Style 555-07)

PROCEDURE

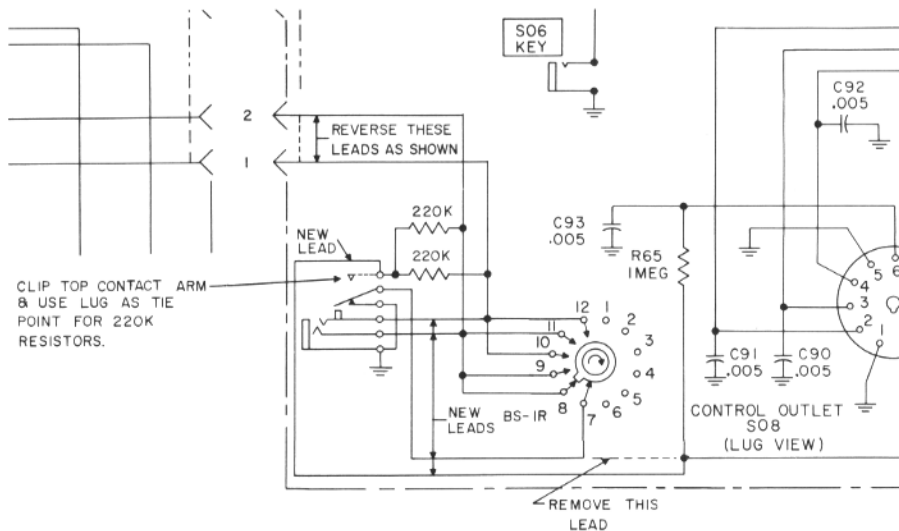
1. Install phone jack in 3/8" diameter hole on rear chassis apron.
2. Wire phone jack. (See Schematic Diagram contained herein.)
3. Wire phone plug to polar relay or polar keyboard, where the sleeve of the phone plug is wired to the movable contact, the ring to one fixed contact, and the tip to the other fixed contact.
4. Solder the 1.5 to 7 MMF trimmer between terminals 5 and 7 on Peco Test Socket Adapter.
5. Remove Sideband Switching Oscillator Tube V4, (12AT7).
6. Plug Peco Test Socket into socket from which V4 was removed.
7. Plug V4 (12AT7) into test socket.
8. Short the 3 conductor phone plug that is in the 3 conductor phone jack and tune the signal on a receiver and adjust the 1.5 to 7 MMF trimmer for a 850 cycle note.

Subscription Rate \$2.75 Per Year
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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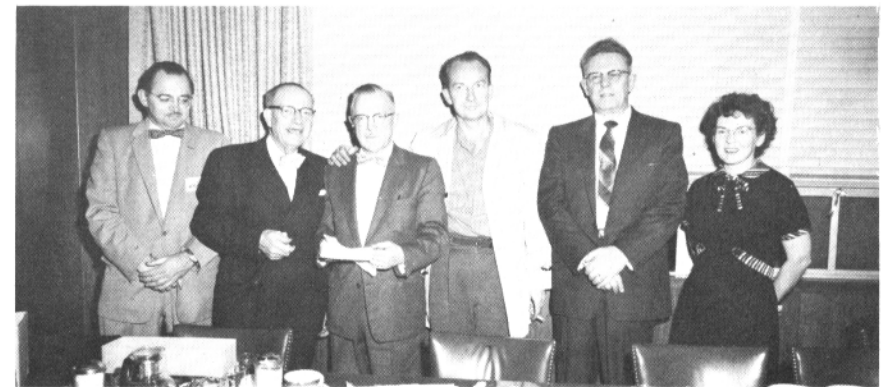
For Information Regarding the
 Society Contact the Following:

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

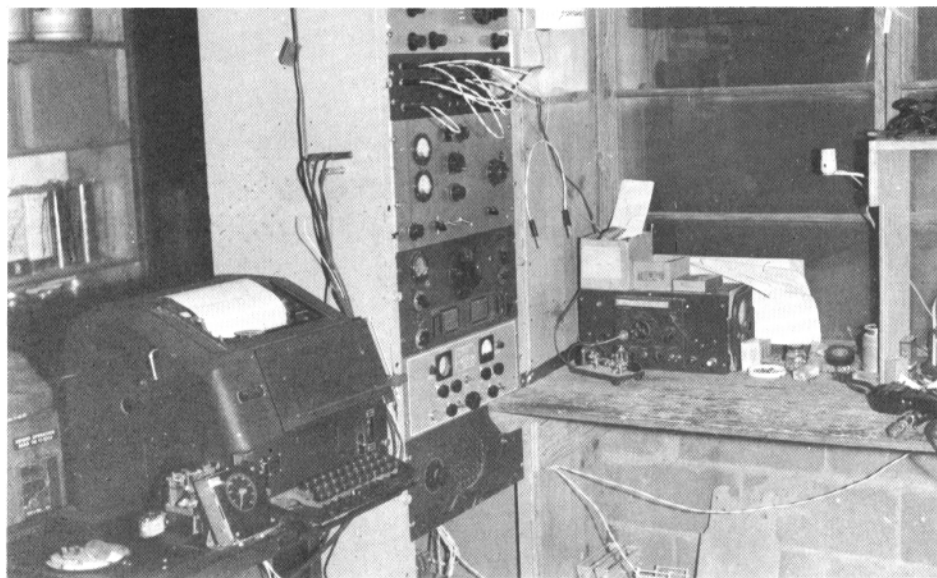


Partial Schematic Diagram Of HT-32 Showing RTTY Conversion

NOVEMBER NCARTS MEETING



ANCHORAGE RTTY GROUP



KL7BK

Jack Walden. KL7BK

Licensed since 1946 as KL7BK. Commercial 1st fone in '42. At KOTA, Rapid City in '42; KFAR Fairbanks in 1945; Built and became Chief Engr for KENI Anchorage in 1948. In 1953 built and became Chief Engr KTVA Ch. 11 in Anchorage. Built associated KTVF Ch. 11 in Fairbanks in 1955. Presently Vice Pres. and Tech. Director of KTVA. Was consulting Engr for KOTA power increase to 5 KW., KALA in Sitka, KABI in Ketchikan, KJNO in Juneau, KLAM in Cordova and KINT-TV in Juneau. Main interests RTTY and Photography. Interested in RTTY since 1949 when he and

and MZ started playing with model 12s and Fax equipment. Charter member AARC, Senior Member IRE, Member SMPTE. RACES Radio Officer for State of Alaska. Member ARRL. Activities Manager AARC. Gear HRO 50T and HRO5. Northern Radio Model 107 converter, 19 Printer, 14 typing reperf, 14 TD. Transmitter home brew 500 Watts. Operates mostly on 40 at present with 600 foot long wire (Moose tripper) aimed Southeast.

Jack's XYL is Nancy, KL7ANG, licensed since 1951. Member PARKA, AARC, and ARRL. Her hobby is of necessity their three girls and two boys ages one through nine.

KL7MZ



J. R. "Nick" Nichols: KL7MZ

Licensed over 20 years. First W7IKH in Aberdeen, Wash. KL7MZ since 1947. Ex Locomotive Engineer on U.P. and Alaska Railroad. In RR Communications about 10 years. Now Wire Chief for A.R.R. Interested in RTTY since 1949 (with KL7BK). Cans up some real vittles in Berry, Vegetable, Moose & Salmon seasons. Gear is HRO-60, Collins 32V1, FGC-1, TT Printer, 14 typing reperf, 19 printer just now starting to print. Has Navy FSB keyer, which he multiplies thru an Adventurer, and drives a pair of 813s homebrew to about 500 watts. Has held several 2 hour QSOs with KR6AK using 170 cycle shift. Has 8 countries,

about 30 states, and has been on almost exactly a year. Charter Member AARC. Alaska SCM in 1951. Resides in exclusive suburb of Rabbit Creek (Bunny Gulch) 10 miles South of Anchorage. Geri (Geraldine) Nichols. KL7ALZ.

Licensed 1951 as KL7ALZ, Had W7RTN (Rough Tough & Nasty) in 1952 & 1953, back to ALZ in '54. Interests, CW and RTTY. Real DX CW fan. DXCC; WAC & WAC YL both on 15 Fone; Maritime Mobile Certificate. Real love is CW. Lacks only a couple of cards for DXCC-CW. Active ARRL & YLRY supporter. Professional experience as dry cleaning expert. Now busy calming Nick down and raising two girls, 11 and 9½, and two boys, 6 and 4½. Charter Member PARKA and Member AARC.

KL7AUV - KL7BLL



Jack Reich, KL7AUV

Licensed in December 1936 as W6OLF. W3ILS in 1939 while in Navy P2Y squadron. W6OLF again in 1940 while at Convair. CAA since 1941 in Calif. Nevada, Palmyra Island & Alaska. KL7AUV in 1952. Interests, 50 Mcs and RTTY. Chief, CAA Avionics Section in Alaska since '54. Gear is type 19 with TD, 14 typing reperf, Rang-

Margie Reich, KL7BLL

Licensed in 1957 as KL7BLL. Active on 15 Fone mostly. Editor Northern Lights Carrier (AARC). Interests. Phone on 15 and 6 when she gets a chance. RTTY when time consuming 50 Mc goes dead for the summer. Punched teletype for Navy weather section in San Francisco in 1944. Caught AUV that same year, (in fact they met and made blind date on TTy.) (AUV was at KSF). Main occupation is boy 13, girl 10, and heckling OM to get her a Freezer. Member PARKA, YLRL, and AARC. HAS RCC (Naturally) and WAC 15 Fone.

Sorry it has taken me so long to get this stuff together. Too many things to do and

er (with 5896A keyer built in), and Super Pro. FGC-1 Converter, and Westrex 50 type converter. All on 15 meters because of Antenna . . . Has SP-600 and assorted junk on 50 Mcs. Only Certificates are WASD 50 Mc Award, and 50 Mc CC. 45 of 49 States on Six, plus ZL1, KH6 VE3 and JA areas 1 through 9. Member AARC. OES. Lives 5 blocks from Chanel 2 in Downtown Anchorage.

no time to do em . . . Only locals I haven't any data on (you've got Ted's data I guess) are KL7PJ, Chuck Sappah who has been on once or twice and Jerry Croff, who was making his first beedles last night. (KL7-BWR). They both have model 15s and Northern Converters. Jerry using Ranger and NC300. Chuck the same. Jerry with Air Force and Chuck an ex FBI man who works at Yukon Radio Supply, one of the local Electronic outlets . . . Chuck's XYL is KL7YG, Marge. Jerry's XYL is KL7CCP, Pat (Cute Cuddly and Petite).

I'm out of time for now, so in the mail she goes . . .

Regards to all - Jack Reich



The Midwest Amateur Radio TT, Soc., Inc. is going ahead full blast at the present time in Kansas City, Mo., or rather I should say the Greater Kansas City, Area. The Club now has about 35 dues paid up members, plus two honorary members. S.W.B.T. has channeled our way quite a bit of gear in the past two years or so. The club has been able to equip a number of Hams with Model 15 and Model 19 machines. Some have needed a little repair, but generally there was not too much needed in the way of repair. We are quite grateful to the Bell people for all they have done for us.

MARTS, at the present time has undertaken a project, which we hope we can do a great deal of good in the Kansas City Area with. This project is a completely mobile RTTY unit. A local bus dealer has donated to us a 40 passenger bus, which incidently is in very good condition, to the club. The American Red Cross has insured, licensed and provided a storage space for the bus. The club is now in the process of installing a Model 19, Model 15, Model 14 TD and a Model 14 Reperf. Also in the process is a 1 KW transmitter for 80, 40, 20 and 10 and a 50 watt 2 meter transmitter, plus two receivers and a AN/FGC unit. Heating, cooking and sleeping accommodations will also be provided. The club at the present time has completed a complete Two meter RTTY station at the Red Cross building, in Kansas City, Missouri. These are strictly club projects and we hope to wind them up by spring.

MARTS, incidently meets every even month on the first Friday at the American Red Cross Building, in Kansas City, Missouri, we hope in the future to have them at individual members homes (shacks), in order to delve in to this RTTY business, more fully . . . 73

-WOIQC Sec. Treas., MARTS

Tuesday evening, January 27th, the Tulsa "TARTS, Inc., held their first meeting since their incorporation last summer, at the home of W5TVG, with a total of 14 in attendance.

For many, it was their first "exposure" to RTTY in operation. A special "greeting card" was printed from Beep, WOBP, and also greetings were sent and acknowledged from Merrill, in behalf of RTTY, Inc. Despite heavy QRM, brief demonstration contacts were established with W6AEE, WOBP, W8GIG, using a Model 26 and a Model 15 in tandem.

Among those attending the meeting were the following:

- *Oren Gambill, W5WI
- *B. F. "Mac" McCoy, W5ESV
- *Dick Taylor, W5RMQ
- Bill Arnold, W5EOB
- Bob Reed, W5KY
- Leon Smith, W5UOE
- *Joe Strait, W5DFQ
- Norm Brewer, W5AYY
- Frank Sober, K5PHR
- Jim Reid, K5KUX
- *Sam Goldish, W5TVG
- W. R. Heath, Ex-W5
- **Charles Petty, Chief of TTY Maintenance for Southwestern Bell Telephone Co., Eastern Okla.

*Dan Gridley, K5BSS, the TARTS "Veep," was scheduled for surgery the following morning, but kept in touch with the proceedings all evening via land-line from his hospital bed. Incidentally, Dan has ordered a Model 15 from Merrill, and as soon as he recuperates he will be busy getting his KWS-1 on RTTY. We wish him a speedy recovery!

Our thanks to Mrs. Oren Gambill and Mrs. Sam Goldish for handling the refreshments. A special vote of thanks to Merrill and Beep for their kind cooperation in the demonstration, and for their kindness in preparing taped messages.

Considerable interest was stirred up in RTTY operation, and it is hoped that Tulsa will soon be well represented on the RTTY bands. 73.

**indicates Honorary TARTS, Inc., member.
*indicates TARTS, Inc. member.

de W5TVG, Sec'y. TARTS, Inc.

The big news this month is the organization of the Dixie Amateur Radio Teletypers' Society, Inc. or DARTS for short. The purpose of this society as set forth in the Articles of Incorporation, are to further the education, understanding and use by radio amateurs of teleprinter operation and to assist in the procurement of such equipment on a non-profit basis. At the recent organization meeting in Daytona Beach, the following were named as Directors: W4RTJ, Tom Lipscomb; W4GVK, Bob Hill; W4RWM, Fred DeMotte; W4EAS, Bert McNamara; W4WMN, Albert Riley and W4EHU, Don Wiggins.

Temporary officers elected were President, W4EHU; Veep, W4GVK; Sec-Treas., W4RWM. The society plans to contact the various commercial companies to procure RTTY equipment which would otherwise go to the "junkies" for distribution to society members at cost. Later, a bulletin may be established and periodic technical and social meetings will be held in various parts of the area. "On-the-air" net meetings are also a good possibility.

Membership is open to any licensed amateur in the Southeast with a genuine non-commercial interest in radioteletype. Those interested in membership write: Fred DeMotte, W4RWM, Sec., PO Box 6047, Daytona Beach, Fla.

I don't have a printer yet, but am building up a fine library of information with the excellent articles in RTTY. 73's

—Glenn W8FMQ

Just getting back with the pile of nuts and bolts after an absence of six months... Sure lots of activity on forty...

There are about a dozen stations in the Detroit area that have equipment that will work the DC bands but don't hear too many of them...

The equipment here is a home brew gallon into a simple ant... We FSK a "WRL" VFO with a XTAL-diode and the machine is the Model 26, receiver is an SX96.

So 73 and keep the mag coming.

—Gerald W8DOO

I noticed that the December issue had come around again and it was time for my little check to you. It is a pleasure to read your fine magazine and I look forward to RTTY with as much pleasure as CQ or QST.

The articles on TU, gear et al are always welcome, but the stories of RTTY in foreign countries and picture stories of local activity is just as interesting. Good luck in the coming year and hope some day soon to get down from our two meter RTTY nets to 7140 and the like. I print all the high frequency boys on forty and eighty, perhaps all I need is a kick to get going. 73

—John W9VYD

I think it is a mistake to print (except for example, which has been done) any of these bulletins in their entirety, for any one contains info such as meeting notices which are obsolete by the time you print them. On the other hand I feel parts of the bulletins I put out have general interest many weeks later, such as the change of six and two meter regs.

How would it be instead to say something like: "gleanings from WOBB bully-tins" or words to that effect, and with or without dates of broadcast, just print in RTTY items that are still interesting to the general fraternity? Another alternative would be to give me a "department" like CQ does to Byron, but I can not be expected to cover everything, "tape off the floor" would be a supplement, and of course I do not answer letters like you do, and I take a dim view on such reports. "Joe Doakes got his 26 and will be on soon," but hail him if and when he does. (south america and europe are the only exceptions.)

Let's not let RTTY get in a rut. Personally I liked the many photographs in the last November issue, but heard two comments it didn't present the perfect T.U.! (We still await that day, hi!)

—FIGS UE, Beep

Boy, this has been a grand and glorious occasion! Heard a pretty strong sig on 3620 tonite, so broke in and there was K5FIM (Keith, W8SDZ) or LRAFB, in QSO with W9AOV; soon joined by W4IYP, W4ZJU, and W5FPD, Hot Springs, with W5VQD at his QTH. Forthwith, we invented and conferred upon the above the WAAARTTY award (Worked Almost All Arkansas RTTY). Made our qso with W5VQD a few nights ago for the first, so far as we know, Arkansas intra-state RTTY qso. Now, we are tentatively setting up an Arkansas RTTY net to meet 2030 CST on Tuesdays, beginning 6 January, which should be of interest to all needing Arkansas for RTTY WAS. on 3620 for the present.

Guess I forgot to give you the lowdown on the grand idea. It is this: We have an RTTY message relaying contest to publicize the speed and efficiency of RTTY message handling. This is done by getting together a bunch of stations across the country who have tape gear and reperfs, agreeing on dates, times, bands, etc. You then originate a message which is automatically relayed through each station in a predetermined order and delivered soon to W1-AW, which then sends a reply back by a reverse route. Thus we can give lots of publicity to how fast it is done. Other stations can participate by copying the message a la Armed Forces Day and sending in error-free copy. How's that sound to you.

Don't believe you ever filled me in on how to phase shift at RF. How about giving with the poop? I have about 3 papers in the fire right now, each of encyclopaedic proportions, one on bandwidth, one on automatics, and one on limiters. So if you run out of something erudite to print, sound off and will try to finish one so you can take liberal swings of the editorial hatchet. Limiters looks the most promising right now; have a research project sort of going at it. Very interesting subject. Have a 14 tube device on the bench now which will detect the presence or absence of 2975 cycles! Seriously, I am getting what promises to be error-free copy from signals with 100;1 noise: signal ratio where the noise is outside the channel. Of course, that may blow

up, for the fire of creativity always brings on the hangover of frustration afterwards, hi. Speaking of signal: noise ratios, I was very interested in those curves of W6PYB's in the last RTTY, those of errors v.s. S/N. Those negative signal-to-noise ratios are wunnerful. What happens if you put that into Shannon's equation where you have to take the squroot and come up with an imaginary bandwidth?! Received the catalog, thanks. es & #, nutz you don't use Figs on a typewriter! 73 fer nw es cul.

—Jim—K5KIB

PS: The 21-A electronic distributor now works!

We are now starting an RTTY Club in Portland. We are trying to get together on March 5, 1959. We hope to meet once a month. The place is not set yet, but we hope to have it at a central location.

The ideals that we have is that we are trying to get all the Hams that have equipment, or that would like to get equipment, to get on the air. There is a large group of hams in Portland that have equipment, though not very many of them are doing anything with it.

At one time you sent me a card saying that you have some ideals about starting an RTTY Club. We could use some ideals.

If you know of anyone around Portland, that have contacted you or your club, that might like to come out to one of these get-togethers, please get in touch with me or have them see or call me.

I have another thing to bring up. Is there any more "26" down in your part of the country. The supply in Portland and Seattle has ran out. There are two hams in our other club that would like to get on RTTY if they could get a set. If you know of any place that they are still at please let me know and I will pass it along.

We are starting to try to line up a 6 meter net in Portland to start this fall. (We hope to meet one night a week.)

Thank you for your time.

—Theodore Peterson W7WWG.