RTTY

TELETYPE CORPORATION'S MODEL 28 LARP

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NEWS OF
AMATEUR
RTTY

VOL 9

NO 6

JUNE, 1961

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.

NEW PARALLEL-WIRE TAPE PUNCH ANNOUNCED BY TELETYPE CORPORATION

A new multi-magnet tape punch designed to receive parallel-wire input from message communications equipment has been developed by Teletype Corporation.

Designated the Model 28 LARP, this new off-line tape punch set will serve as a "slave" unit in a wide range of data and message communications systems. It is electro-mechanically operated, and provides programmed storage in fully perforated tape.

In data collection systems the LARP records information gathered from many sources into one "combination" master tape. This tape can be used in communications systems, thus simplifying data relaying.

When attached to business machines, such as calculators, adding machines, electric typewriters, cash registers and other parallel-wire output devices, the unit yields a record by-product tape.

Operating at 20 characters per second, the new Teletype tape punch is available for 5, 6, 7, or 8 level operation, and will remove the problem of tape preparation from system planning.

In addition to modern, compact styling, the LARP is built for quiet, continuous performance and long lasting operation. Vibration is reduced to a minimum by absorbent rubber mounts separating the steel base plates.

The 65 watt, 115 volt, 60 cycle, synchronous motor also is rubber mounted, and features thermal overload protection.

The Model 28 LARP is manufactured for the Bell System and other users who desire the ultimate in dependability from their message and data communications systems.

A four-page, illustrated brochure is available at no charge from the manufacturer. Write to Teletype Corporation, Dept. SP-14, 5555 Touhy Avenue, Skokie, Illinois.

G3GNR, Robert (Bob) Short

AMERSHAM, BUCKS, ENGLAND

Bob is active on RTTY on 14,100 and 21,090 and has made contact with some of the East coast gang. At present he is building a Gnded Grid PA and installing a new Beam to beef up his signals a bit.

Here's the run-down on the rig set-up.

Transmitter: 100 watts to parallel 807's

Rcvr: HRO

TU: Discriminator type designed by G3-BST with a 1 KC band pass filter ahead of it.

Printer is a Creed 7-B page printer.

Present antenna set-up is an end fed 64 foot wire.

Foto #1 shows Transmitter, Receiver, Oscilliscope for Checking incoming FSK signals, Creed 7B page printer and below is the G3BST TU

Re DUAL IDENTIFICATION

EDITORIALLY SPEAKING . . .

In a recent ARRL board of directors meeting, several proposals were brought up which seem to us to be long needed . . . "ARRL will request FCC rules provisions for slow scan facsimile in the voice sections of the 1Ø and 15 meter bands, and to eliminate the requirement for CW identification of RTTY stations."

Although we cannot work up too much enthusiasm about the slow scan fax operation in the 1Ø and 15 meter bands, the subject of CW or more commonly called "Dual Identification" of RTTY stations hits home much harder.

Back a couple of years ago, the late Boyd Phelps, WØBP, started practically a one-man campaign for change of FCC rules eliminating the so-called dual I.D. Somehow, after his untimely accident, the subject seemed never to have been openly publicized very much.

The present FCC rules require the following identification by RTTY stations: (1) Identification on radioteletype, and (2) Identification by either International Morse Code or voice (in the case of operation in the VHF bands using AFSK). This so-called dual identification is often very inconvenient, especially during a bulleting broadcast, or in the case where two RTTY stations are solidly in QSO. The only time it did any good was when the call was not printed in RTTY (due to QRM, QRN, or QSB) during the initial call of a new QSO. To this end the dual ID could still be voluntarily utilized.

One good argument presented by WØBP was that the standards for RTTY operation are very precisely spelled out in the FCC rules, including the RTTY code to be used, speed or length of code pulses, etc. This is much unlike the operation of experimental "odd-ball" systems of TV scanning, FAX, etc. To which the dual ID rule should still apply. Teleprinting equipment is now generally available, especially to FCC monitoring stations.

We feel that the requirement for CW identification for RTTY stations is almost as nonsensible as requiring all SSB stations to reinsert their carriers during their station identifications. In both cases, at least, it would be a step backward . . . from a superior mode of communication to an inferior one for I.D.

Let's watch this development before the FCC in the future. The ears experimenter will endeavor to keep you abreast of the latest happenings.

RTTY SOCIETIES

BARTS
Boston Amateur Radio Teleprinters Society
c/o Jack Berman, W1BGW
28 New Haven
Boston 32, Mass.
BARTG
British Amateur Radio Teleprinter Group
c/o Arthur C. Gee, G2UK
"East Keal", Romany Road
Oulton Broad, Suffolk, England
CATS
Chicago Amateur Radio Tele Printers Society
c/o Ray Morrison, W9GRW
8029 Keeler Avenue
Skokie, Illinois
Florida RTTY Society
c/o Fred W. DeMotte, W4RWM
P.O. Box 6047
Daytona Beach, Florida
MARTS
Midwest Amateur Radio Teletypers Society
c/o D. L. McMullen, WØATM
1404 South Spring Street
Independence, Mo.
Portland RTTY Club
c/o Theodore Peterson, W7WWG
3705 S.W. Stephenson Street
Portland 19, Oregon
Puget Sound RTTY Society
c/o Harold Wade, W7HRC
3457 37th Avenue, West
Seattle 99, Washington
RATS
Radio Amateur Teletypers Society
c/o Robert S. Fincke, KØAKG
10908 Russell Avenue, SOUTH
Minneapolis 20, Minn.
RTTY, INC.
RTTY Society of Southern California
c/o Merrill L. Swan, W6AEE
372 Warren Way
Arcadia, California

TAKING THE STRAIN AND PAIN OUT OF AMATEUR RADIO TELETYPE OPERATION

First, let me state that the operator at W8TL W/A8TLW is a guy who likes to do things in a simple straightforward manner with a minimum of confusion and wasted effort.

Secondly, a year's operation of amateur radio teletype has convinced me that an arrangement for rapid switching of equipment is necessary on RTTY networks if one does not wish to be left by the wayside.

In view of the above facts and the mess of haywire, plugs, jacks, etc. then in use at the station, it was apparent that something had to be done. The junk box produced the parts for a 10 deck switch, 1 pole and 11 contacts per deck, with rotation stop adjustable for the use of any number of contacts. After several circuit arrangements were tried, the circuit shown in SK-1 was wired up. A 6 x 6 x 6 aluminum box contains all the equipment except the 130V. power supply. Four positions and eight poles of the switch were used to control a model 26, transmitter, receiver, V. F. O., monitor, antenna relay, etc. Thus, the whole station was under the control of one switch.

Before going into the operation of the switch positions I might state that the antenna relay, receiver muting and carrier monitor are normally under control of the transmitter plate relay in the same manner as when the transmitter is used for push-to-talk phone transmissions.

Switch position 1.—Hand keying for calling and signing. Model 26 motor not running, transmitter plate on, receiver off, VFO on, monitor on, antenna on transmitter, and carrier under control of the hand key.

Switch position 2.—Transmit RTTY. Model 26 motor running, printer in keyboard loop, transmitter on, receiver off, VFO on, antenna on transmitter, monitor on, carrier on, and carrier shift under control of the keyboard.

Switch position 3.—Receive RTTY. Model 26 motor running, printer in terminal unit loop, receiver on, transmitter off, VFO off, monitor off, antenna on receiver, etc.

Switch position 4.—Local loop. Model 26 motor running, printer and keyboard in an isolated loop. This permits a rapid insertion of a carriage return or line feed if they are missed or garbled.

It should be noted that in position 3.—, the keyboard is in the transmitt loop and if the VFO is turned on by the switch on that unit, it is possible to send from the keyboard, pick up the signal in the receiver and test the whole setup on a radio basis. This also permits monitoring the shift of the VFO.

Other points to be noted are as follows:
A.—Switch SW-1 is the main power switch. It controls all the A.C. power to the whole set-up except the terminal unit.
B.—Switch SW-2 is the forementioned rotary switch.
C.—Switch SW-3 is for changing the mode of hand keying. In the up position the keying is regular C. W. on the mark frequency. In the down position the keying circuit to the transmitter is closed which turns on the carrier and then the hand key shifts the carrier frequency over the RTTY transmit loop for F-1 keying. As shown in SK-1 the carrier shift is 850 cycles for F-1 keying but it is planned to reduce that to narrow shift keying for calling and signing at some later date.
D.—A relay is provided for turning on the motor on the Model 26 machine as the small switch contacts would soon burn off with the starting current of this motor.
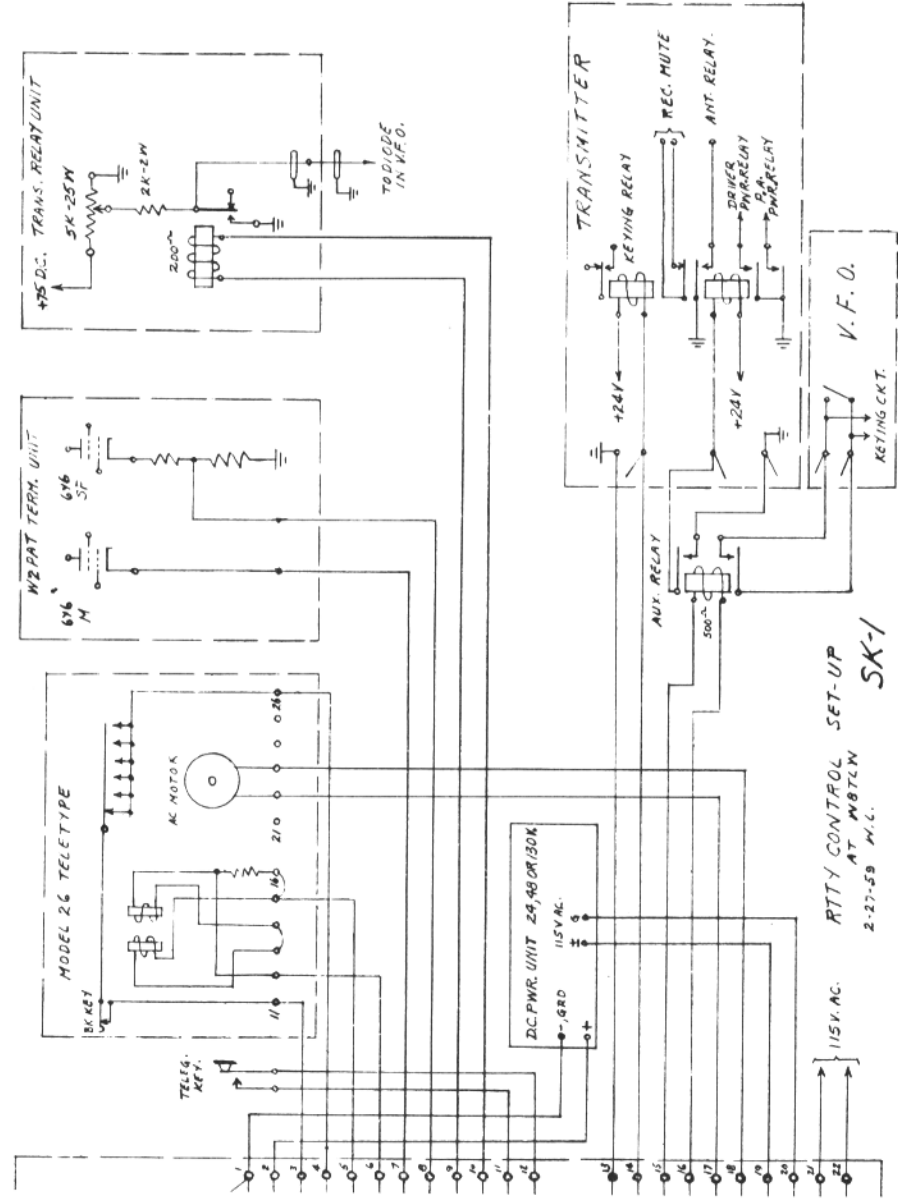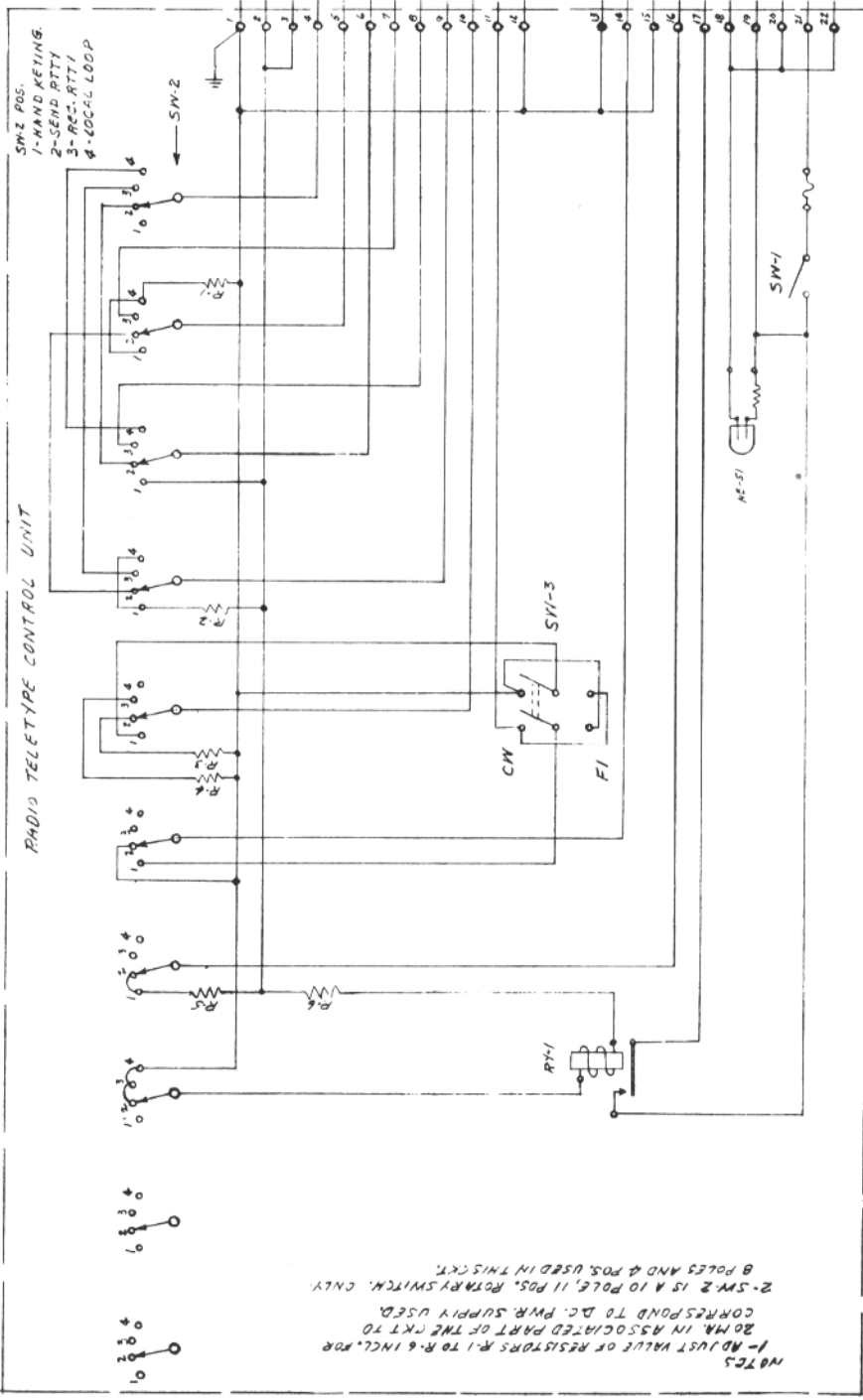
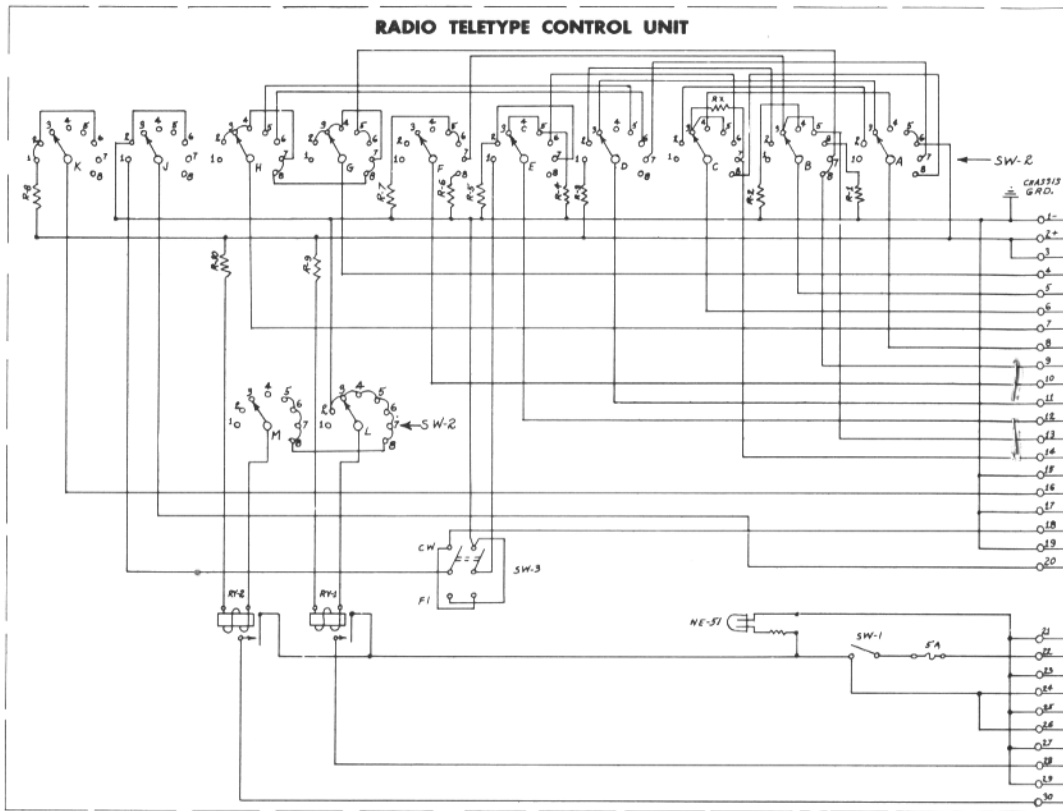Now for the second part of the story. About the time that the set-up was working properly, I managed to latch onto a W. U. model 22-A tape dist. and a model 23-A tape perforator. This changed the aspect of the set-up but all was not lost.

To incorporate this gear into the switching set-up only required that the swtich be changed to 12 decks by changing the spacers between decks to 1/4 inch and putting on the two new decks, adding a relay for the 23-A perforator, adding a terminal strip on the box and doing a bit of rewiring. The switch stop was reset for 8 positions resulting in an arrangement as shown in SK-2.

The operation of switch positions 1, 2, 3 and 4 of SW-2 are the same as above in all respects. The new positions 5, 6, 7 and 8 are as follows:

Switch position 5—Receive RTTY on the printer and punch tape for the answer to the message on the perforator from the keyboard.

RADIO TELETYPE CONTROL UNIT

SW-2 POS.
1-HAND KEYING.
2-SEND RTTY
3-REC. RTTY
4-LOCAL LOOP

NOTES
1- ADJUST VALUE OF RESISTORS R-1 TO R-6 INCL., FOR
20 MA. IN ASSOCIATED PART OF THE CKT. TO
CORRESPOND TO D.C. PWR. SUPPLY USED.
2-SW-2 IS A 10 POLE, 11 POS. ROTARY SWITCH. ONLY
8 POLES AND 4 POS. USED IN THIS CKT.

D.C. TRANS. RELAY UNIT

W2PAT TERM. UNIT

TRANSMITTER

KEYING RELAY

REC. MUTE

ANT. RELAY

DRIVER PWR. RELAY

P.A. PWR. RELAY

V.F.O.

TO DIODE IN V.F.O.

MODEL 26 TELETYPE

AC MOTOR

D.C. PWR. UNIT 24, 48 OR 130K

AUX. RELAY

KEYING CKT.

TELEG. KEY.

115 V.AC.

RTTY CONTROL SET-UP
AT W8TLW.
2-27-59 M.L.

SK-1

RADIO TELETYPE CONTROL UNIT

RTTY CONTROL SET-UP
AT W8TLW

ORIG- 21 FEB 60   W.L.
CHG.- 22 AUG 60   W.L.

SK-2

NOTES:

1. Adjust value of resistors R-1 thru R-8 for 20 MA. in associated part of ckt. to correspond to D.C. power supply used.

2. Adjust value of resistors R19 and R-10 to operate raleys RY-1 and RY-2 with reasonable margin.

3. Switch SW-2 is a 12-pole, 11-position rotary switch. 12 poles and 8 pos. used in this ckt.

4. Resistor R-X on SW-2, C is equal in value to the D.C. resistance of the line winding of the polar relay in the W.U. tape perforator.

5. The motor on the W.U. tape dist. is controlled by its own switch.

6. Patch jacks permit use of various terminal units and transmitters.

7. Note arrangement of receiving loop at terminal unit.
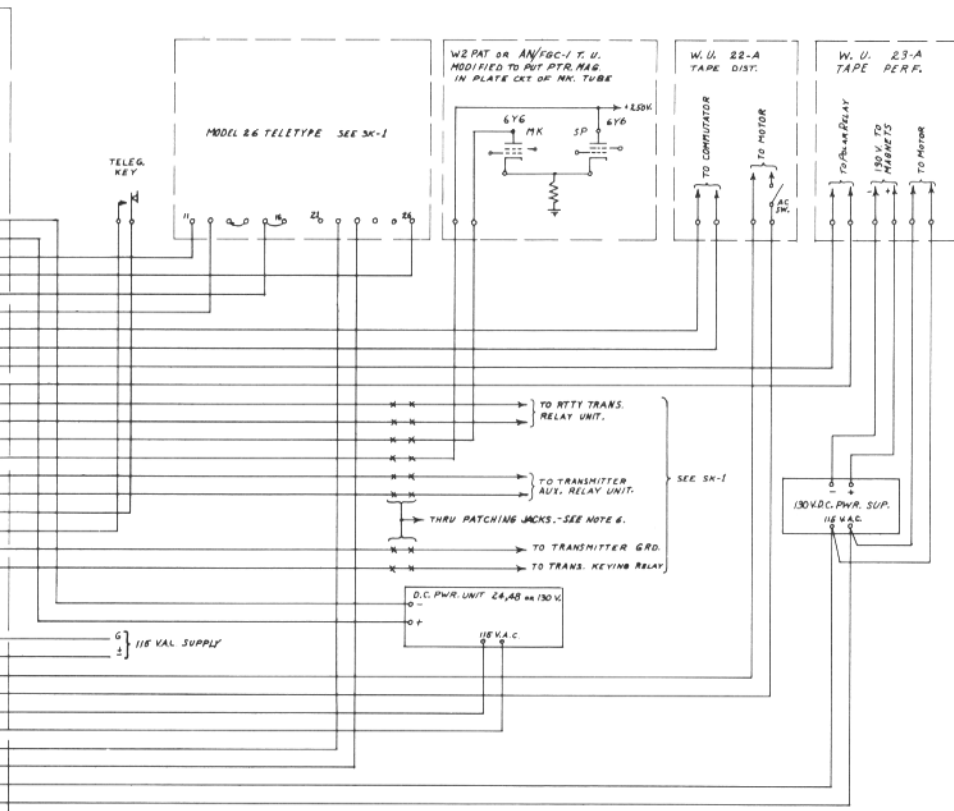
8. The 8 pos. of SW-2 provide modes of operation as follows:
   1. Hand keying.—C.W. with SW-3 up—FI with SW-3 down.
   2. Transmit RTTY.—Control by keyboard or tape dist.—local copy on printer.
   3. Receive RTTY on printer.—RTTY transmitting loop is operational from keyboard or T.D. for testing overall radio circuit.
   4. Local loop.—Keyboard and T.D. to printer.
   5. Receive RTTY on printer.—Punch tape with keyboard in 23-A perf. loop.
   6. Transmit RTTY from T.D. with local copy on printer.—Punch tape with keyboard in 23-A perf. loop.
   7. Receive RTTY on printer and punch tape of rec. message on 23-A perf.
   8. Local loop with 26 keyboard and printer, 22-A tape dist. and 23-A perf.

Switch position 6.—Transmit RTTY from the tape dist. with local copy on the printer and keep on punching out the answer on the perforator from the keyboard.

Switch position 7.—Receive RTTY on the printer and punch a tape of the message at the same time.

Switch position 8.—Local loop for prepunching tape messages with local copy on the printer. The printer, perforator, tape dist. and keyboard are all in this loop. That is the position of the swich at this moment as I peck out this dope sheet and make a tape of it at the same time.

It should be noted that in all three of the RTTY receive positions that either the keyboard or the tape dist. is in the transmit loop for local testing of the system by radio signals as was the case in position 3 above.

No doubt there will be many more modifications of this switching set-up as time goes on but I thought that some of the boys might be interested in how the switching problem was licked at station W8TLW.

Now if I can only find some easy way to slow down those Western Union units from 65 WPM to 60 WPM this gear will be singing like a bird.

The end for now. —73 De W8TLW Bill
—0—

The symbol was made up by John Brehl, (Associated-Press) Made it up for K2HHO I finished it off with the call signs of each site, K3UNW at City Hall, and W3-UNW at the Pennsy 30th Street Station.

I equipt both sites with a model 15 and a 14T.D. plus the necessary terminal gear . . . these were on two meters, and were used to link both locations together via RTTY . . any traffic was then fed to the low freq. boys on the site on SSB, phone, CW, ... we also worked most of the two meter boys on RTTY, (in the area) and used the symbol and pix of "IKE" for publicity while sending it back and forth between sites.

The stations on RTTY were manned during the U. N. week Oct. 24th to 29th by the following local RTTY boys:

K3BHK—Jerry
K3IUV—Bert
W2GOK—Chas
W3ILN—Herman
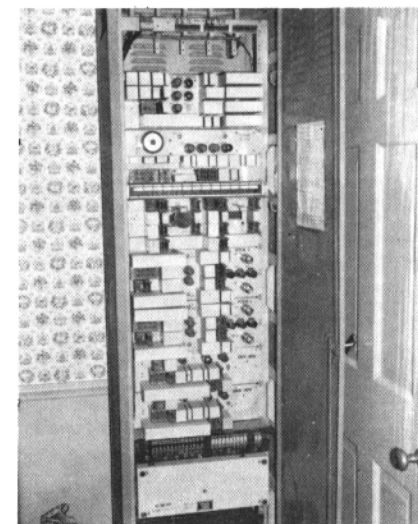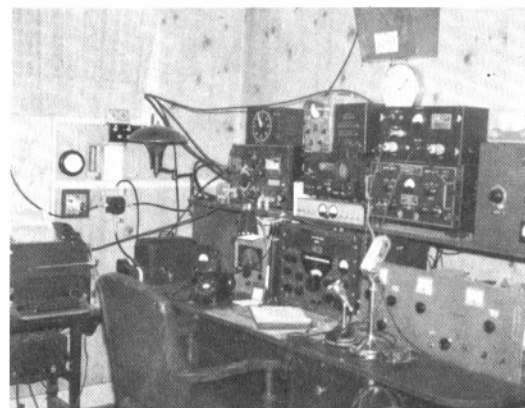W3YEA—Rod
W3CRO—Dick
K2MBT—Dick
K3LDQ—Gil

Our local two meter gang on RTTY now has about 15 members, and I hope to increase this still further.

73 Phil, W2JAV

SUGGESTED RTTY OPERATING FREQUENCIES

3620,7040,14,090,21,090 Kcs

W4AAS
John M. Stockberger
1452 Hannaford Road
Winston-Salem, N.C.

W2KXT/AF2KXT
Frank W. Taylor
P.O. Box 222
De Witt 14, N.Y.

TG9AD
Roberto Engle
P.O. Box 514
Guatemala, C.A.

KM6BU
Lt/Col Ken Tribou
AEWBARRON PAC DET,
NAVY#3080,FPO,San Francisco

"RE-RUN NR. 104 ??????

Here are two photographs, one is of my set up at my new location at work (thanks to the Colonel) and the other is of myself and Jim (KL7CDG) taken during the "Fur Rendevous." Hence this Letter.

First the "PARKA" and the "AARC" clubs got together and set up a station in the "PNA" ticket office in Anchorage and took traffic from anyone and everyone that passed by and wanted to send a message back to the lower 49. Believe me when I say that we had traffic to every state in the Union. Jim would pick up the traffic at night and bring it out to me in the morning first thing. The beauty of it was that it was in tape form punched out at the ticket office by "Margie" (KL-7BLL and her OM, Jack (KL7AUV) as well as Jim who stopped in to pick up the tape. The station was operated under the call of KL7CUD/KL7. Besides the RTTY traffic, many phone patches were handled by "Mary" (KL7BJD).

After receiving the tape, I was lucky enough to hook up with one fine fella and operator in Sacramento, California, namely "Gene" (K6DSQ) who very graciously took all 466 messages via RTTY on 20 meters. It took a little over 16 hours total time with ID and a few re-runs because of jammers. I can't thank K6DSQ enough, along with K6GB who I understand is NCS of the MARS net for his district and sent them out via RTTY and C.W. Now that it is all over with, it was fun and I wonder why more traffic isn't handled via RTTY, because let's face it, that is the only way to send a volume of traffic such as we had.

The picture of (from left to right) myself and Jim.

"Ted" KL7CAT

DX - RTTY

By Bud SCHULTZ, W6CG
5226 N. Willmonte Ave.,
Temple City, California

HI Gang:

Due to a bad case of Spring Fever operating activity here at my listening post has been at a low ebb this month. However, lots of info has piled up on the ole desk from all my DX correspondents!! Bill, G3CQE writes that Henry, ZS1FD, arrived in London right on schedule but that due to the French Crisis he had to make some changes in his itinerary. Hope to have a report on Henry's trip in the next column. Bill also reports that G3JFF is in Singapore where he is signing VS1HU and has RTTY gear available. Bill says further that G3JFF/VS1HU is keen to work RTTY/MM and will be wandering about the Pacific for the next five or six months and will be operating from such places as VR1,2,3, and 4 so a word to the wise is sufficient. Shank, GM8FM, writes to confirm the fact that he had an FSK contact with Ed, K3GIF, on 14 MCs. before his power transformer blew up. This bit of trouble has been remedied and Shank is now in business and looking for all the RTTY contacts he can scare up. Like all of the rest of us, Shank is trying to decide on the best TU to build and at this time is still trying to make up his mind. He has a surplus AN/URA8 converter available but needs a schematic or a tech. manual on the thing in order to check it out. So far we have not been able to help him on this score.

Ed, K3GIF, reports a good solid QSO with PY1KU in Brazil and says that Edwin has a fine FSK signal on 14 Mcs. PY1KU is also able to use forty meters but suggests frequencies below 7040 Kcs because of South American phone QRM. Edwin reports that PY1LM and PY1JB are also active on RTTY on 14 Mcs. PY1KU is shifting a Central Electronics 100V exciter and has a homebrew TU and a model 15 printer. His RTTY experience goes back to AACS duty during the last World War when he worked for an affiliate of PAA in Northern Brazil so Edwin is no stranger to the Green Key fraternity. Here's another

good chance to pick up that elusive South American contact for your WAC-RTTY!!

Signals from VK and ZL are back up to their old "pipe-line" strength once again and week-ends finds VK3KF, ZL1WB, ZL3HJ etc. boming thru with their usual fine copy. ZL3RT writes that he has ZL3HJ's model 26 and will be active as soon as he can get a shifter built for his HT-37. Alec, ZL3HJ, writes that his recently acquired model 19 is "strictly cloud nine stuff." In spite of all his extra curricular activity ole Bruce, ZL1WB, still seems to find time to get in a few good licks every week end on both 21 and 14Mcs. Bruce keeps threatening to put up some beams but so far this project is still on the drawing board.

Ken, KM6BU, continues to bombard the States every week-end with just about the biggest RTTY signal ever heard here. If you could use Midway Island for your DX list try listening around 0400 GMT some Saturday night on 14,090 KCs. If you don't copy Ken with an S-9 signal better check your receiver!!

From the current issue of the BARTG news (edited by G2UK) comes lots of encouraging news concerning European activity expected in the near future. G2UK reports that DL1GP recently had an FSK QSO with DL6AW on 3.6 Mcs. Hans, DL1GP, also informed Doc that DJ2BY has a new 100V Central Electronics rig and hopes to be on RTTY shortly. He reports further that HB9SZ is trying to get some TTY gear on the air. There is to be a big DL amateur gathering at Dortmund on the 22nd of May and Hans hopes to plant some of the RTTY germs in the lads at the meeting. Good luck, Hans!!

The DX Committee has been really burning the midnight oil setting up the rules governing the new International Sweepstakes to be held the week-end of October 21-22. This will be an entirely new venture in the Sweepstakes field and should prove to be a very interesting, (and hectic)

week-end. The rules have been designed to give the overseas lads a chance to compete with the North American stations on what the committee hopes will be an equitable basis. The original idea of having a strictly "DX" test was abandoned in favor of the Sweepstakes when after much discussion it was decided that there was still not enough Countries represented on RTTY at this time to make it a real contest for the participants. The rules, as they are set up will give contestants points for both domestic and foreign contacts but in addition there will be multipliers and bonus points for DX exchanges that will pay big dividends in scoring for time spent in hunting for the overseas stations. There will be additional bonuses for working DX on more than one band. This is being done in the hope of encouraging multi-band DX operation. The format for this World-Wide sweepstakes is the net result of the many ideas and suggestions received over the past four months from RTTY'ers on all six Continents. Thanks to all of you for your interest and hope it meets with your approval. A complete rundown on the test along with a detailed set of rules will be in an up-coming issue of "RTTY."

Just as I was winding this out of the typewriter word comes from Eric, YK3KF, (Via W6TPJ) that the Australian Authorities have just OK'ed RTTY for all Australian hams on all bands!! This is pretty exciting news for the fellows down there who have been striving to get RTTY recognition for a long time. This undoubtedly will mean the appearance of some new DX calls from VK-land and give VK3KF a "breather" once in awhile. That's it for now, Gang — BCNU next month.

73
Bud, W6CG

TARTS
Tulsa Amateur Radio Teletypers Society
c/o Sam Goldish, W5TVG
3830 South St. Louis
Tulsa Oklahoma
There are other clubs, which are not known to your Editor. Please send in your listings or corrections.

CARL FRENCH, W8GIG