

*Semi-Diversity
 Radio Teletype Operation*

W6ZH - W6AEE

Since the opening of the lower frequencies to Amateur Teletype operation, many of the circuits developed for AFSK operation have performed reasonably well, but not completely satisfactorily. One such circuit is the terminal unit (T.U.) described by W6AEE in the December 1952 issue of C. Q. In the interim period since publication of the original article, changes have been made in the terminal unit to overcome certain operational difficulties. The circuit to be described in this article eliminates or minimizes these problems. The circuit to be described below overcomes many of those present in the original unit.

AFSK on two meters with transmitters adjusted for 85 to 90 per cent modulation gave signals which were relatively easy to convert into d-c pulses to operate the Teletype printer polar relay or selector magnet in the single magnet machines. FSK on the other hand presents many new problems. Fading of the mark or space signal, as well as static, are some of these problems. Ideally in the absence of noise and interference, either mark or space alone can be used to derive the necessary d-c current to operate the Teletype printer. This feature was kept in developing this circuit.

The T.U. up to the detector circuit is identical to the original described in December C. Q. From the output of the filters (BC-733 filter modified) the signal is now applied through a three-position switch which provides copy from mark only, FSK or space only, thence through the normal reverse switch into the 6H6 used as a detector. The load circuit for the detector has somewhat shorter time constants than the previous unit in order to reduce the possibility of random noise keying the printer. Next the output is taken from the center of two five hundred thousand ohm resistors (500K) thru a series five hundred thousand ohm resistor (500K) to the grid of one half a 6SL7. A small amount of low pass filtering is provided by an 0.001 mfd. capacitor from grid to ground. The output of this 6SL7 is fed to the paralleled combination of a 6H6 diode clamp circuit and the grid of the 6Y6G d-c Keyer tube. The clamping level for the 6H6 is adjusted by the

(Continued on page 2)

NEWS OF AMATEUR RADIO TELETYPE

RRTTY

16 R T T Y



HORSE TRADES

This page of the Bulletin is for use of amateurs who have teletype equipment for sale or trade and for those looking for equipment to buy or trade. It is a free service and may be the means of getting some one on the air.

- FOR SALE—Model 12 with Sync Motor W6CAP
- FOR SALE: 12 Rec. only, with sync motor W6EV
- FOR SALE: 21-A and Rec. Dist — New 25 W2EHW
- Trade 12 TT w/key'd and Keyer for 15 Printer W6HFK
- WILL TRADE—Model 15 Complete (Less Printer) for Model 15 Printer Only W1AFN
- WANTED—Tape Gear W8BYB
- WILL TRADE Model 21-A Printers with Roll of Tape FOR SURPLUS Gear W1AFN
- SWAP—MG Set for Model 12 and WU Perforator For a Complete Tape Transmitter VE2ANM
- WANTED—AN/FGC-1 Manual W2VDM
- WANTED—KEYBOARD W9SPT
- FOR SALE—Single Space Gears for Model 12 W9UAU
- Wanted—Model 12 Keyboard VE2AGF
- Wanted—Keyboard for Model 26 VE2ANM

SOUTHERN CALIFORNIA RADIO
 TELETYPE SOCIETY
 3769 East Green Street
 Pasadena 10, Calif.
 Return Postage Guaranteed

Regular Meeting of SCR7S

The Regular meeting of the Southern California Radio Teletype Society was held at the home of Ralph Poore, W6OQB on Saturday evening, August 1st, in the town of Arcadia.

The group assembled in the Pool Room and spend a couple of hours shooting pool. (There are a few slickers in the group, with top honors falling on W6FLW) after which the meeting was finally called to order.

W6FLW, Emile Duvall acted as Chairman and started things off at 9:40 p. m. The first topic was Net Activities and W6NAT started in with a request of a time change as his farming interferes with the Net. After a lengthy discussion and a vote for the suggested change to 8:30 p. m. the balloting ended with a tie 8 to 8 so it was decided to allow all members to vote by post card so send in your preference to Emile.

More activity in the form of traffic was suggested by some of the members and interest in this matter was enjoyed by all present.

A low frequency discussion was held and Merrill gave some interesting high lights on his recent trip to the East Coast. A vote was called on the 40 meter frequency to be used by the Society and information to be forwarded to the ARRL. 7140 kc was selected.

Lewis Rogerson, W6SCQ gave his Secretary's report and informed the group that membership cards would be presented to them at the next meeting.

Ed Phillips, W6IZJ, gave a demonstration of his electronic keyboard which was enjoyed by all.

The meeting was adjourned at 11:20 p. m. by W6SCQ.

The following 16 members and one visitor were present:

Art Addaway	W6OQB
W6BWQ	W6MYC
W6JAU	W6EV
W6IZJ	W6KNI
W6ILW	W6AEE
W6IIV	W6SCQ
W6NAT	W6FLW
W6PNW	W6CL

W6GYC, visitor

The next meeting will be held at the home of Bill Driml, W6NAT in Montebello, and Bill informed the group that the refreshments would be goats milk. W6NAT is located at 912 So. Montebello Boulevard, one block north of Washington Blvd., two blocks east of Greenfield. The date is Saturday, September 25.

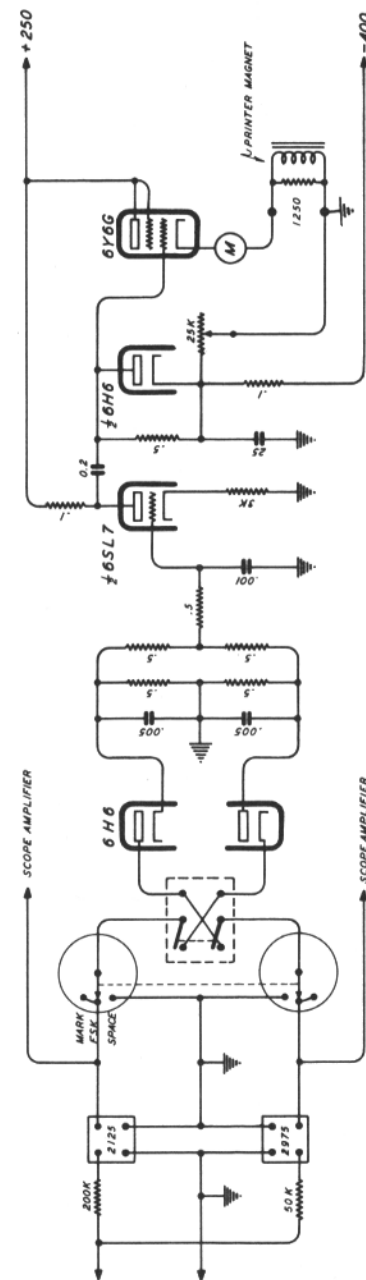
SEMI-DIVERSITY RADIO TELETYPE OPERATION

(Continued from page 1)

twenty-five thousand ohm potentiometer between cathode and ground. The negative 400 is taken from the 'scope supply on the T. U. Damping for the transient voltage generated at the time the current is cut off in the 6Y6G cathode, due to the collapse of the d-c field in the magnet, is provided by the 1,250 ohm resistor across the coil.

In operation one can tune an FSK signal in a normal manner with the switch on FSK and copy will be found to be as usual. Then try first mark then space, copy will still be O. K. Another test which can be made is to either use the crystal filter on the receiver or adjust the beat oscillator so that only one frequency is received, then with the Mark-FSK-Space switch on either mark or space, copy will still be O. K. This means that as long as either mark or space signal is received solid, copy will be O. K. Fading of one or the other will not effect copy. It is obvious that make-break copy can also be received with this circuit. This will permit Teletype operation without FSK modification to any transmitter that can be keyed for CW. Much work remains in order to fully develop M-B operation, but it is felt by the author, that much can be gained, (in presence of interference) by use of make and break transmission. I wish to acknowledge the suggestions and help of Herbert Hoover, Jr., W6ZH.

FIGURE 1—CIRCUIT DIAGRAM OF W6AEE TERMINAL UNIT



A Simple Power Supply for the 2-in. Oscilloscope Tuning Indicator

By R. WEITBRECHT - W6NRM/W9TCJ

As is well known, the usual cathode-ray tube power supplies represent some compromises in the matter of availability of parts. Ordinarily a replacement type BC power transformer is used in a half-wave rectifier circuit to generate the desired high voltage. This is a practical way to do it, although somewhat bulky. However there is a way to simplify the size problem by utilizing television booster power supply components, now available from a number of sources at low prices.

The power supply circuit shown in Figure 1 consists of a transformer together with a voltage quadrupling rectifier system, thus capable of generating 450 to 500 volts d. c. at a current drain of a milliampere or so, sufficient for operating a small CRT electron gun. The transformer has two secondary windings, one delivering 110 volts a. c. at 40 milliamperes while the other delivers 6.3 volts at 1 ampere. The rectifiers are small 110 selenium rectifier units, and the capacitors are 0.5 microfarad bathtub units. The 6.3 volt winding on the transformer operates the filament of the CRT directly, and the high voltage output from the rectifier system operates the electron gun voltage divider. The latter is shown in the figure, also, for those who may wish to duplicate the circuit.

If desired, additional voltage for operating the electron gun may be obtained from other sources, such as the AFSK converter power supply, simply by connecting it into the point indicated in the figure. The overall voltage could be as much as 700 to 800 volts which will then give a thin bright trace on the CRT screen. In place of two spot-centering controls, a small weak magnetized steel

bar placed in a certain position near the CRT forms an efficient and simple way to center the spot on the CRT screen. Similarly, the horizontal and vertical gain controls can be eliminated by judicious choice of resistors in place of such controls, inasmuch as they, once set, are permanently set for use with the terminal unit in question. Reference is made to a discussion on tuning indicators by W6AEE, in the May 1953 issue of RTTY.

These power supply kits are ideal also for operating grid dip oscillators, bias systems, small RF amplifiers, and anything else requiring moderate DC voltages at low currents. The current prices are such that one can stock up on these items, which are ever useful.

POWER SUPPLY CIRCUIT (Fig. 1) →

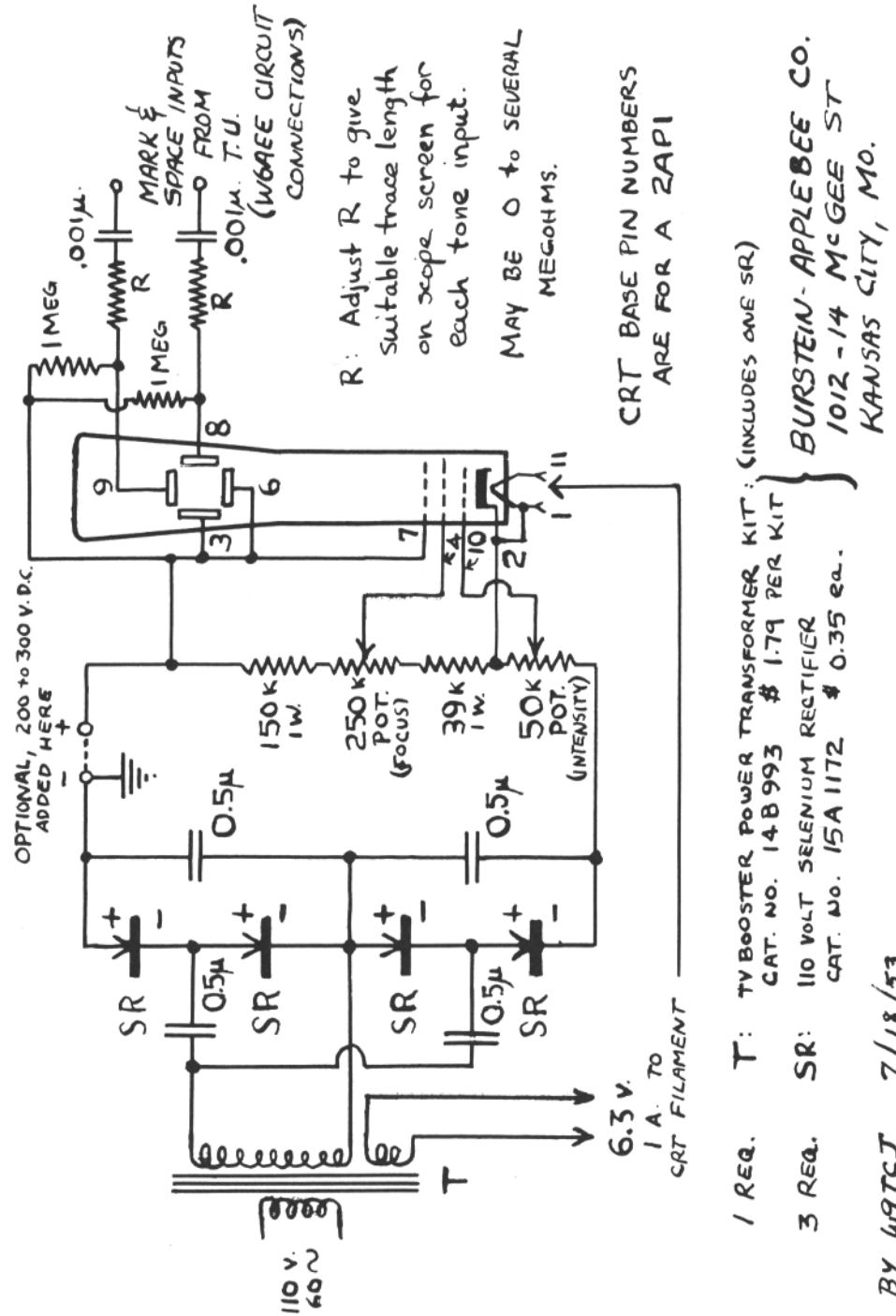
RTTY is the Official Publication of the Southern California Radio Teletype Society and is published for the benefit of all Radio Teletype Amateurs and Experimenters. Permission to copy is granted provided credit is given.

For Information regarding the SCRTS contact the following:
 W6CLW—Ed Simmons
 W6AEE—Merrill Swan
 W6SCQ—Lewis Rogerson

For Traffic Net Information:
 W6FLW W6IZJ

For "RTTY" Information:
 W6CL W6CLW
 W6DEO W6AEE

Figure 1—Power Supply Circuit Diagram



Traffic Net News

EMILE DUVAL, W6FLW

The Southern California Radio Teletype Society Net operates every Tuesday evening at 7:30 p. m. on 147.85 mc.

With winter coming on and the end of Daylight Saving Time a new problem has come before the Net Committee regarding Net starting time. At the recent meeting of the Society some members requested a later starting time than 7:30 p. m. and as there were only sixteen members present at the meeting the Committee decided that those who were missing were entitled to a vote on the subject also. It is requested that all members please drop W6FLW a post card indicating their desire for a Net starting time. The suggested time was 8:00 p.m. instead of the 7:30 p.m. time so if you wish to leave the time as is or wish it later state so on your card. Majority rule will be followed.

Appointments for Net control for the coming months are as follows:

August 4—W6EZF
 August 11—W6GFI
 August 18—W6IIV
 August 25—W6NAT

September 1—W6NWM
 September 8—W6OQB
 September 17—W6PNW
 September 22—W6SCQ
 September 29—W6RL

October 6—W6WYH
 October 13—W6ZH
 October 20—W6AEE
 October 27—W6BWQ

Any station unable to act as Net Control is requested to get in touch with W6FLW a week before their specified time and Emile will arrange an alternate Net Control. It would be a good idea for each Net Control station to drop

Emile a card the preceding week and let him know that they will or will not take Net Control for their evening.

Traffic during the summer months was really low and more activity is requested so if you have any traffic let's put it into the Net and encourage as much traffic as possible.

Two meter activity is picking up and there should be more stations checking in as time goes along.

Activity for the month of July is follows:

July 7—W6CL, N. C.—9 Checkins.

W6AEE	W6PNW
W6CAP	W6SCQ
W6CL	W6WYH
W6CLW	W6IZJ
W6NAT (thru W6CL)	

July 14—W6IZJ, N. C.—10 Checkins.

W6CAP	W6EV
W6CYR	W6SCQ
W6CLW	W6FLW
W6EFE	W6IZJ
W6CL (thru W6CLW)	
W5QAN/5 (thru W6CLW)	

July 21—W6FLW, N. C.—13 Checkins.

W6AEE	W6KNI
W6CL	W6PNW
W6CLW	W6SCQ
W6EZF	W6EV
W6IZJ	W6ZH
W6LSG thru W6SCQ)	
W6XBV (thru W6AEE)	

July 28—W6EV, N. C.—10 Checkins.

W6FLW	W6FLW
W6AEE	W6IZJ
W6CAP	W6KNI
W6CLW	W6SCQ
W6EV	
W9TCJ (thru W6AEE)	

Don't forget to drop Emile a post card and let him know your wishes for Net Starting Time. Direct some of that traffic through the Teletype Channels.

Amateur Radio Teletype Station W2JAV



STATION INFORMATION ON W2JAV

Sorry to not have written you sooner, but things just keep piling up here. Hi Don't know just what has happened to the activity on the lower frequencies, but RTTY signals certainly have dropped off. I really had hoped that more and more boys would get on but it certainly don't look that way at present. I really wish some of the boys out your way would get on twenty. For I am certain that it would make for more solid QSO ... How about it???? As is the forty meter band is ready to drop out at the time you boys get on. I guess that the time difference certainly is a factor, but still think that twenty is a better bet at this time, fact is I would like to make a sked with someone.

I am sending you a shot of my layout here, a bit old, but as you can know changes will be made. I see by the bulletin that you need more info on the layout here, include a model 14 strip printer, a model 14 reprep., a 1A tape transmitter, a home made distributor and a 21 strip printer. Receivers here are a super-pro and a SX 28 using the signal slicer all the time now as it sure is doing a job. Have a forty KC outboard with both FM and AM detectors, this in turn keys the local AFSK OSC for local copy. Marv, Pat and I have tried this system and it too has good results. In cases of bad phase distortion it is better than the conventional BFO deal. It's one short coming is the capture as to be expected with limiters. Am still working on the deal hope that some day I will have something to send you on it.

I don't know if you knew it or not Merrill, but Howie W3LMC has taken 8 MM movies of the local gang on RTTY. Should make nice showing for you boys, am sure that he would be glad to send it to you. Have written W4OYG about the fifteen he was supposed to have, but had no answer as yet???? Also am interested in getting dope on a 26 as I never

have seen one, I certainly would like to have something better than this monster. The folks keep complaining about the noise (me too) Hi, so if you have any info on a 15 or parts of one ,would like to hear about it, have more to trade, TV gear, cameras, etc., test gear, mostly lab gear and of course surplus, if the price is not out of this world, would consider it too.

I am glad to hear W1AW on the air, Frank has sure been putting the pressure on them. Enclosed you will find a copy of the dope on the RFI problem with the model 12, I find that it does a good job here, and is certainly more reliable than vacuum tube keyer. Frankly the noise level on the 12 can be brought down to a very low figure that would hardly be noticed!!! I still feel the troubles most fellows has it that of local noises generated by the MUX.

I am very pleased with the bulletins Merrill, keep up the fine job, most of the local gang have the same remarks. Have not made much progress with the SSB rig. but still trying, had hoped to give you dope on a FB method of tuning FSK, but as yet don't have the darned thing working, looks like it ought to do the job, should give constant running indication of the transmitting spacing and amount of shift in each direction—just another project I hope to complete someday.

Thanks for the use of the exciter. Merrill, hope that I can do something for you in return, so for now best of 73.

CORRECTIVE MEASURES for Model 12 R. F. I. By W2JAV

- 1-D. C. power supply should be built in 12 case...use transformer with electro static shield filter input leads to 110 volts with RFC chokes (forty turns on half inch form) and .1 MFD each side to ground (input side).
- 2-Ground one side of the D. C. to the machine deck.

3-Install polar relay in case of 12 (most of the polar relays are there) be sure to gnd. pin No. 8 of relay (case gnd.).

4-Install two 1500 MFD. small disc ceramic caps. across polar relay fixed contacts to frame (both mark and space).

5-Add a 75 ohm two watt carbon resistor in series with each mark and space contact at base connections of socket.

6-Use shielded leads from polar relay field winding to chanel amp. Add 1500 MMFD. ceramic caps. to base socket pins no. 2 & 6 to frame gnd.

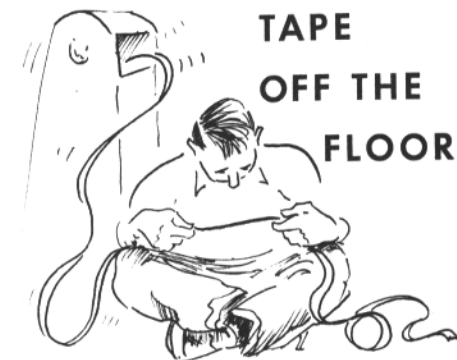
7-Add .005 disc ceramic cap. across latching magnet to ground. At coil frame.

8-Add 1500 MMFD. ceramic cap. from sixth pulse magnet to ground.

9-Use shielded keying leads from keying contacts to keying circuit, ground one side.

10-Try adding .05 MFD. across each of the 75 ohm resistor added in no. 5 polar relay mark and space contacts to ground and check for noise reduction.

11-Ground the machine frame to other equipment, make sure that cover of MUX also gets a good ground to base of frame — keep receiver antenna as far as possible from machine (a little distance will show a great reduction, most machines have the spark killer condensers in the base of the printer — for those that are external suggest that they be moved in side of cover.) In general try to keep the noise makers in the inside of cover and with the leads filtered it should stay there.



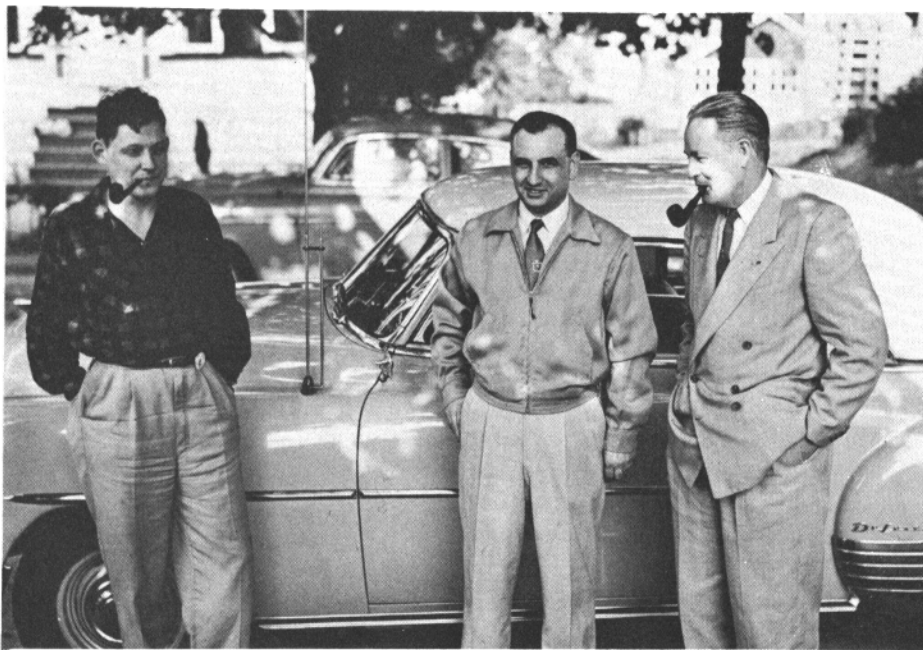
Last month we had to cut the "Tape Off the Floor" a little short and had a lot of material left over so this month we will include what was left over and add the usual amount so as to keep the "Tape" up to date.

... Had a little QRM trouble, some local station came on and called me . . . and it turned out to be W9OKQ/9 located just a few hundred feet below us on the Lake Shore at George Williams Camp. He was blocking the receiver here. Now he is off for the time being (eating lunch). W9UAU de W9TCJ

... Many thanks for the wonderful time that you gave me this evening. The W9TCJ—West Coast RTTY circuit is a reality!!! First time tonight I ever did anything like that. Hope to work W7VS-W7LU, etc. later on. Certainly had a wonderful time with them last summer. W6AEE de W9TCJ.

... What say Beep. George will see you later on. WØBP de W9TCJ.

(Continued on Page 13)



W2PAU

W2JAV

W6AEE

East Meets West

Recently your editor had occasion to be in the East for a short time, and like all good hams, took along his address book. First calling on Frank White W3PYW one of the best known East Coast RTTY stations on the air at this time, he arranged for your editor to visit other stations. On turning his equipment on, found W1AW Murray Powell on 3620 Kc's, and made Contact. After this, other contacts were made with W2JAV on two meters.

Franks equipment is located in a large basement operating room, with space for all kinds of Teletype gear. A low frequency transmitter which can be keyed FSK and also a 500 watt two meter transmitter comprise his transmitting gear. The receivers are a National with a 800 cycle filter added which really works, and a good two meter receiver make up this portion of his station. A model 12 with a 2-A tape preforator and a transmitting tape head complete the station. Frank is employed by the

Air Transport Association in Washington D. C. Frank talked to Phil W2JAV and arranged for my meeting him at the Railroad Station in Philadelphia the next day at four P.M. I arrived ok, but had forgotten to ask how we would know each other. After passing each other for a period of ten or fifteen minutes, I finally asked a likely looking person if by chance he was W2JAV. And luck was with me. We then went out to Camden and meet W2PAU, Brownie, best known as the Technical Editor of CQ. We spent a very pleasant time looking at his equipment and then drove over to visit Ed Kephart, W2SPV, who took the photos. Ed has a very fine station located on the second story of his home. It is a very neat station with all the usual teletype equipment.

I was told that one reason that these were heard so consistently on the West Coast is due to their using a tilted doublet type of antenna, pointed at the West Coast. Copy from the West Coast seems to bear this out. RTTY will be glad to report on visit of other RTTY members visits if they will be sent in with suitable photos and write ups.

Comments from Readers

"I wonder if you know of anyone who would be interested in swapping a re-perforator for a model 26 machine complete with keyboard? If so, please have them contact me."

—Rod Buszard, W8BYB

"Frank and I are doing some experiments with duplex RTTY. At least here it is feasible to run both xmtr and rec. at same time if on different bands. LOTS OF FUN!"

—73—Bob, W9TCJ

"Received issues of RTTY today, very good. I have dropped W6PNW a line regarding the keyboard—looks like I have the RTTY fever. Thanks."

—Wayne Abern, W6PYM

"For some time now I've been strictly a single sideband enthusiast, but every-time I plck up a "CQ" I find myself reading the articles on RTTY. I'm afraid the bug has bitten me and I would like to have some more information on RTTY besides that appearing in "CQ."

—Sig, KL7ATL

"Thanks for sending the copies of RTTY. You certainly have a very attractive, well arranged, and interesting magazine. 73."

—A. D. M. Lewis, W6NYI

"I think before long I might have some dope on all Electronic Regenerator for TTY signals, looks like a sweet deal. 73 for now, hope to see you on RTTY."

—W7KBM, College Park, Wash.

"Please send me, if available, fifteen (15) No. 7737 chokes as used in W9TCJ Teletype converter. You are to be commended on your foresight in snatching up these items while still available. 73."

—Tom, W1TWP

In the past as the amateurs have found a good piece of equipment, the price has gone up, hence the "snatching up" of these items.—Ed.

"I would like to find out all about RTTY, and membership, etc. Neal, my Jr. Operator goes to Cal Tech and will be a Senior next year, while W6LIP, the old man, well I am in charge of the Radio Communications for the Flying Tiger Line, Inc."

—Tim, W6LIP

There are many of the air lines personnel who are interested in RTTY, state-side as well as Canada.—Ed.

"I have just returned from a two and one-half month business trip to India, Europe and the United Kingdom and am now back on the air. 73."

—Bill, W2DXD/A2DXD

"I am very interested in finding out the prices of various teletype equipment. If your magazine does contain information concerning the cost of RTTY equipment I would greatly appreciate it if you would forward some typical prices.

—G. D. Johnston, W7JNI

"Have a Model 12 less keyboard. Now assembling a selective amplifier. Hope to be on the air as soon as a keyboard shows up."

—Marion, W7OSV

"He is the president of the Radio Club of Cuba, is going to put in a Cuba-USA TT link soon on 20 meters for traffic"

—Alberto Giro CO2QY

"Howdy Nabor: as you can plainly see I am the proud possessor of a model 12 page printer.--- Have you any suggestions concerning the missprints I have enclosed?"

—Loern Godwin, W9LKK

"When I get a little more time, I hope to get on the lower freqs with FSK but right now am up my ears in work, both on my regular job which by the way is with CAA (Mac Arthur Field) in Maintenance. Also after hours, I have other work to do."

—Al Waring, W2CFT

"Here is a cutie for your test tapes. After RYRY, etc., and "The quick brown fox"—add: Our signals never die they just F-A-D-E-A-W-A-Y."

—Chuck, W9THE

"Just receive the RTTY news this port couple of days ago and just beginning to settle down—Hi! As ham operation is not permitted aboard these "vessels" (Ed.), all I have is receiving equipment plus a 26 printer and a converter I built up of the January QST issue. Remarkable results (for me), been able to have very interesting copy from Formosa, Japan, Philippines and Honolulu on the way over."

—Dale, W6JIE

"I also have a 19 which I hope to have ready soon—it was a war surplus job and was in such shape that it needed a cleaning. -- Do you know of a motor and base unit for a 15 for sale?"

—R. C. Bohannon, W8AV

"Have been visiting some of the Chicago TT boys, Bud, Bill and Ray W9's TBO, HXW, and GRW. And saw copy of your bulletin."

—George, W4AIY

"Would it be possible to dig up a old No. 2 issue? This would complete my file. Also are there any more No. 7737 chokes available?"

—Tom, W9EQF

(NOTE: RTTY is going to reprint No. 2 later this fall, a note will appear in RTTY when they are ready, A card will bring any one wishing them. Chokes are still on hand, however not too many.--Ed)

"The activity in Chicago is very limited but we are working on it all the time. Ray Morrison, W9GRW is on the air with a 14. Jack Gallup is all set but waiting for his ticket, I have a 15 now and all I need is a good converter."

—Bill Soich, W9HXW

"My amateur call is W5WKP and my Civil Air Patrol Net call is "Eagle Nest 17". I believe that Radio Teletype would be a great help in both the above endeavors."

—John, W5WKP

"I just got my 12A on the air last night."

Warren, W8IJV

"Am interested in obtaining a receiving only type Teletype printer. Wonder if you know where one is available and cost?"

—D. C. Harrington, W5RBX

"I have a receiving panel and soon about finished, and with the arrival of some gear as mentioned above, you may even be able to work KL7 on RTTY."

—J. W. McKinley, KL7CK

"I used to maintain Teletype for CAA for a number of years, from the Model 12 thru 19 but I suppose it has progressed far beyond that stage now."

—Rich, W1JR

"TAPE OFF THE FLOOR"

(Continued from Page 9)

... So back to you Emile, I now have the beam on you and next round will put the ground plane on. W6FLW de W6SCQ.

... W6EV de W6CAP. Sure Ham they are still low though but now I can copy, try raising them just a little more and see what happens.

... W5ENH de W6AEE, well not too good. Am very sorry. Guess something is wrong out here. The shift is still quite low. The pattern on the scope is far from a cross but get words now and then.

... OK Bob, fb, didnt get you tuned in very well that time and there was QRM on one of your frequencies, hi. Been trying to work you for a long time. I was on when the band first opened up and then got snowed in at the farm for three days and heard you working a lot of Eastern stations. W9TCJ de WØBP.

... Solid Ham and yes, I did get the tape all OK. Boy, oh boy, when I dont get on the air too often its sure hard to get back in the swim again, or so it seems. W6EV de W6BWQ.

... Hope you can copy all right now. I hope so. At least will keep the freq. busy for a while till some activity comes along. I usually get out here for about an hour or so but have to go in around eight o'clock. I dont have much chance to work many guys. Who do you hear most active on forty meters here? W6AEE de W6PNW.

... I copied the Seattle stations call as W7IAB and his address is 11734 Sand Point Way, Seattle, Washington, but havent heard him since his call which he asked for cw reply on freq he was calling on. W6AEE de W6OWP.

... I don't have a forty meter receiver now and I will have to change bands on the BC348 receiver to hear Merrill. Back to you Frank—go ahead—fine Bob. W9TCJ to W6AEE de W3PYW on forty. (A cross-band duplex, Ed).

... QST, QST, QST. This is W6EV Net Control for the Southern California Radio Teletype Society. This will be a controlled Net and all stations are requested not to break in unless called. This Net meets at 7:30 PDT each week and requests all amateurs with teletype equipment to join us. The roll call will now begin de W6EV.

... Was over to see Doc (W9UAU) last Sunday, and had a time adjusting relay. An old wheatstone. So had to rig a 215-A relay in the circuit to get the printer to work right. Later this week I had a letter from Doc saying the old bearings in the wheatstone relay were all shot and no good. Repeat no good. No wonder we were beating our heads against the wall these months! I have of course requested Doc to put in a flip flop circuit. He has been volumously doing home work around his place and really has not had too much for RTTY. de W9TCJ.

... You are putting in a 5-8-9 signal tonight but didnt hear anyone come back to you so warmed up the equipment here. W6AEE de WØCIH.

. . . . W9UAU calling CQ on 3620 kc.

. . . . Well they are all dog tired—hi. Have been cleaning up things here in preparation for going away for a week starting a week from tonight and I have been at it all day and sorta ready to retire de W6IZJ.

" " " " " " " " W6KNI de W6EV. Rabbit tracks again, hi boy, this is W6KNI to W6EV and GA Ham.

. . . . Swell Rube and very pleased to make your acquaintance. VE3GL de W9TCJ.

. . . . I guess W5QKJ is interested in RTTY also. If this keeps up, New Mexico should be pretty well represented in this field. Well Merrill I have company and they are getting a kick out of this RTTY so back it comes de W5QDD.

W7KBO from Portland, Oregon, was down looking at W6CAP's model 12 last week and contemplating buying same.

. . . . Calling any 40-meter Amateur Radioteletype Station. This is W6ITH.

. . . . CQ CQ CQ CQ Q de W8ZM, W8ZM Detroit, Michigan, anyone copy this?

. . . . Well swell Merrill and Bob and FB but let me turn down this forty meter signal hi. And Merrill I think this is swell that you can re-broadcast me on forty. Well Bob, will be there one of these days as soon as I can get my forty meter vertical up. W6AEE W9TCJ de W6SCQ.

. . . . Say OM, I have a sked with W9 UAU at noon on 3620 kc, so I better QRT. WØBP de W9TCJ.

. . . . Hi Bob and I think that I have forgot how to run this stuff, and I see that I sure have lost a lot of speed!! as if I ever had any, hi. Well as you know I am a married man now, so that is the reason that I never get on the air any more, and it is not the fault of the XYL, as same likes the radio, the big thing is that I do not have enough time, and then I am not living at the trailer much anymore, we have an apartment in Westchester and all I have on there is a Green Eyed Monster. I think that I will have RTTY at that in about a week. Well Bob you are S9 here and I have the beam on the mountain, so what is new in the RTTY circles?? W6CAP de W6RL.

. . . . Good evening Frank and sure good hearing you again. Getting solid copy from you and the gang. We have nice condx now for a change. Went keep it as Murray wants to run along, so GA Murray. W1AW, W3PYW, W2 PAT de W1BGW. Take it Murray.

. . . . OK Herb. We moved the beam toward Pasadena and your signal came up above the 9 mark. You were Sugar 6 before. W6ZH de W6FLW.

. . . . Had a nice three way with W3LMC Sunday. Howard, W3LMC was on Two. I copied him on Two. Say I wonder if W3RHX is on, min. Lessee. W3RHX, W3RHX de W3PYW, you on Stu???? Take over and print to W9TCJ.

. . . . Say Bob, what days or hours are you usually on the air? Wonder if you are a star gazer that stays up all night or do you work on the huge math in astronomy? Please repeat again about the zero keys on most machines. Will not hold it as we seem to be skipping over each other. Might be on tomorrow and if so will look for you. How about a schedule at one p. m. Tuesday- GA. W9TCJ de WØBP.

. . . . Say, Frankie Boy, I got my scope hooked up a la W6AEE Tuning Indicator. It certainly looks interesting. How do you read? W3PYW de W9TCJ.

. . . . Fine Bob and yes we have a lot of 26's on Two and Herb has one on MAB either 80 or 40 meters. Also there is one at W6OQB, Ralph in Arcadia. A KW station. Herb's is Collins KW-1. Hi. W9TCJ de W6AEE.

. . . . Also Ted's address is "F. T. Swift, Jr., CDR. USNR-Navy 961, Box 39, FPO San Francisco. RTNET de W6AEE.

Ted Swift, W6CMQ is overseas and will be gone a long time. Anyone wishing to write him see above address. We miss you very much, Ted.

. . . . Gosh you should have seen WØBP's transmitter? I have not seen it yet, but he tells me that he is using a water cooled transmitting tube (old tube) and he runs the filament at 22 volts and 41 amperes—repeat, 22 volts at 41 amperes. All that power just to keep a filament warm. I did not get the RF power he is running, but presume it is under a killowatt. W6AEE de W9TCJ.

. . . . That is W3RHX retransmitting thru W3PYW and we are retransmitting it again thru W9TCJ!!!

. . . . W6AEE de W6SCQ. Hi Merrill and whats new up your way this evening and here is a surprise for you so stand by??? This is W6HOE, don't know if this is a surprise or not. . . .

. . . . W9TCJ, W2JAV, W5QAN de W6AEE. OK Bob, but not solid on Phil. He is about a QSA 3-4 and QSB bad, tell Phil in case he is not copying me that I have a letter started to him, and also Phil, give my regards to Miles Brown, W2PAU.

. . . . Wondering if anyone is reading this RTTY. The handle here is Trot, Short for Trotter. I only have tape Xmitter here so I can not receive RTTY so please come back to me in CW about 20 wpm. de WØUVL, located in Pierre, South Dakota.

. . . . W6AEE and W6PNW de W5QAN W5QAN/5 near Carrizozo, New Mexico. Fine there Ray and very glad to meet you, and it won't take you long to get used to this keyboard, hi.

. . . . Well if I told you after that stuff you guys have been eating you would not like it, hi. I feel fine and all that I had was—nothing—three nectarines, hi. Well I feel like a million after me little snooze and could get out and run a mile if someone carried me. Well now what do you think of that Mr. Schwander? W6KNI, W6FLW de W6EV.

. . . . Have you worked Earl W8BL and W8ZM at Detroit. Both are copying in here evenings FB. also W5QAN/5 and W2HZE/5 as well as W5QDD, and of course our stand by W9TCJ, Bob. So see you later on and more QRM is off. W3PYW de W6AEE, Pasadena.