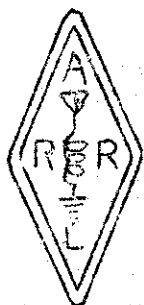


PACK RATS' CHEESE BITS



MT. AIRY V.H.F. RADIO CLUB, INC., PHILA., PA.

(50.2, 144.2, 221.4, 432.2 & 1296.4 MC.)

CLUB CALL: W3CCX

AFFILIATED MEMBER: AMERICAN RADIO RELAY LEAGUE

EDITOR: HELEN BRICK, XYL, W3SAD

MEMBER OF: AMATEUR RADIO EDITORS' ASSOCIATION

A
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VOLUME VI

NUMBER 7

(Meeting notices:
Last page)

OCTOBER 1963



COLUMBUS DAY

OCTOBER 12



UNITED NATIONS WEEK

OCTOBER

20 TO 27



HALLOWEEN

OCTOBER 31

"CHEESE BITS" PUBLISHED MONTHLY FOR THE MT. AIRY V.H.F. RADIO CLUB, INC., PHILA., PA.

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DEADLINE FOR ARTICLES IS THE 15th OF THE MONTH.

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CLUB CALL: W3CCX

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MEETINGS: DIRECTORS: Second Wednesday
of each month, 8:00 P.M.

GENERAL: Third Wednesday of
each month, 8:00 P.M.

MEETING PLACE: WEST OAK LANE JEWISH
COMMUNITY CENTER, SEDGWICK &
THOURON STS., MT. AIRY, PHILA.
PA.

MONDAY NIGHT NETS:
144.2 - 8:00 P.M.
50.2 - 9:00 P.M.
221.4 - 10:00 P.M.
NITWIT- 50.2 - 10:15 P.M.

NET CONTROLS:
144.2 - W3SAO, Frankie
Alt. - W3FSC, Ozzie
50.2 - W3CL, Harry
221.4 - W3KKN, Ernie
NITWIT - W3SAO, Frankie

EDITOR'S CORNER

We wish to apologise for the lateness of the last issue.

We had it all ready, and packed in the box for assembling and mailing while on vacation, on the 15th of August. On the 16th of August, we received a landline call from the Prez, K3HWZ, Bill requesting us not to mail them as W2AXU, Jack, had withdrawn his petition for Director of the Atlantic Division.

Therefore we had to wait until we received pink sheet, announcing the candidacy of W3HFY, Harold Grace and W2PPS, Fred Kaffer for Director and Vice Director. Upon receipt of same, we made sure that each member got one and the exchange papers and as many subscribers in the Atlantic Division, as was possible. Unfortunately, not all of the subscribers in the Division got one as we were short.

Yes, we had a grand time on our vacation and a report will appear elsewhere in this issue.

ELECTION OF DIRECTOR, ATLANTIC DIVISION

The furor of nominating is all over, and in a few weeks you will receive your ballot for voting. To be of assistance to you in your selection, we list the capabilities of W3HFY, Harold Grace, for Director and W2PPS, Fred Kaffer, for Vice-Director, as supplied to us by the Campaign Chairman, W3CL, Harry Stein.

DIRECTOR: Harold P. Grace, ALIAS: Hal, W3HFY, W3AWA. AGE; 44. ARRL member. Licensed amateur for 26 years. Chemical Engineer, Research Associate, employed by DuPont, Wilmington, Del. Member of Mobile Sixers, Mt. Airy VHF and Philmont Mobile Radio Clubs. Licensed RACES operator. Trustee W3EQ Delaware County C.D. Ardent builder of homebrew transmitters. Full member of AREC. Net control W3AWA. ALL bands.

VICE-DIRECTOR: Fred C. Kaffer, ALIAS: Doc. W2PPS, W8CTL. AGE: 58. ARRL member. Licensed amateur for 44 years. Employed as Director of Pupil Services, Board of Education, Syracuse, N.Y. Former SCM Western New York. Member WAC, DX Century Club, QCWA. Full membership ARRL many years. Active member of Syracuse VHF Club Inc. Fred is also listed in "Who's Who" in Science & Education. ALL bands.

Both of these men are active and can be found working on all bands, both high and low frequency-Mobile as well as Fixed- AM and SSB. Extreme care should be exercised when contacting these men as they are fully aware of all the complexities of Hamdom. Failure to vote for these men can mean

ELECTION (Cont'd)

lack of proper representation on vital matters concerning all amateurs.

YOUR vote DOES count! VOTE for HAL and DOC in the coming election.

Give YOUR VOICE "TALK POWER" at Headquarters.

CAMPAIGN HEADQUARTERS

Atlantic Division

W3HFY

W2PPS

September 18, 1963

Dear O.M.

The preceding having to do with the coming election for Directors of the ARRL is, to a certain extent, self-explanatory. There are, however, certain complications which ensue when a campaign of this sort is run - not the least of which is the cost of this campaign. We are speaking now strictly of out-of-the-pocket expense having to do with printing and mailing of necessary publicity to carry the message.

As Campaign Chairman for W3HFY Hal Grace and W2PPS, Fred Kaffer, it is, of course, my duty to see that these men are elected and also that I gather the necessary wherewithal to make this possible. Here in the Delaware Valley area, as well as in the Syracuse area, the generous response of clubs and individual hams has been most gratifying; however, we are still far from the necessary goal to do a complete and thorough job.

I am sure that you realize, as I do, that a change is needed in order to give us complete representation on all bands, in all modes for the Atlantic Division. Any contribution that your group provides will most certainly be of material assistance in reaching our goal.

May we suggest that at your next Club meeting this message be publicized and such funds as are collected can then be transmitted to;

Campaign Chairman, W3CL, Harry Stein
2087 Parkdale Ave.,
Glenside, Pa. 19038

All contributions will be acknowledged and a full financial report of all expenditures will be transmitted to contributors.

Your cooperation in this effort will be greatly appreciated by the entire committee and yours truly,

Harry Stein, W3CL
Campaign Chairman

COULD YOU?

You say you've got troubles. Your teeth need repairs, the kids need new clothes; the car got a crumpled fender; the roof is leaking; the house needs

painting and a new heater; everything is closing in on you and you couldn't smile if someone paid you. Is that your trouble? Then listen to the tale of two men buried 331' underground!

Yes; we mean the two miners from Shepton, Pa., Davey Fellin and Hank Throne.

While drilling the second 12" escape hole, some more debris started to fall and Davey Fellin reported, "Our home is crumbling, we just lost our newly furnished bedroom." Another time, when asked if he wanted anything, he said, "Pipe down some good music. I'm tired of Hank's hillbilly songs." When Governor Scranton finished talking to them, Hank Throne said he was pleased he "had dropped by to visit." Asked if they needed more food, Davey said he had enough to start a supermarket, all he needed was the customers.

With the mike left on, in the hole, the two men could be heard singing. One of the songs was; "Massa's In The Cold, Cold Ground".

It takes more than courage and stamina to surmount difficult situations; it also takes a sense of humor.

It was their sense of humor that kept up the morale of the rescue workers and made them more determined than ever to get them top-side.

When both of them reported what they saw, while awaiting rescue, nearly everyone came to the conclusion that they had hallucinations.

Now we would like to put it this way; Had only one man seen it; then, yes, we would say he had hallucinations. But - both men saw it at the same time. We feel that this is the explanation of what they saw. Religious, or not, the Almighty God was speaking to them, assuring them that He was with them and would deliver them safely.

Just as "Jonah was delivered from the belly of the whale", so these men were delivered from "the belly of the earth".

We, ourselves, stayed away from the mine site as we felt they had enough troubles without our complicating matters. We did have a very small part in helping. When it was announced that they were seeking radio active material and geiger counter, we knew where they could get it in 15 minutes. Utilizing the "Emergency Radio Unit" card from AREC and the "Press" card from AREA, we went to the office of the Hazleton Standard-Speaker to give them the information. We asked the policeman for directions to the office, and seeing the cards, he stopped traffic for us so that we could proceed on a red light. When we returned to the public parking lot for the car, the attendant said, "No charge for parking."

(Cont'd)

Regarding communications; the Tower TV Co., Hazleton, provided the amplifiers. Shure Brothers, Chicago, supplied extra sensitive mikes and a CB Club supplied walkie-talkies. We received this information from K3KVK, Fran Hillabush, Ringtown, Pa. He was one of the welders helping to change bits on the drill.

W3ZRQ, Al Breiner, SCM E. Pa., received and delivered traffic to "OK, Mike" the drill operator.

That is only one incident of our vacation.

OUR VACATION

We left for Quakake, Pa. (Earthquake, to all so inclined to call it) on the 17th of August. Along with us, in his car, as he was only staying one week, was our son K3LBT, Al.

The first incident that threw everyone off was the fact that Route 309 no longer makes a turn-off, following the Allentown out-off.

When we passed the place that we used to make a "turn-around", Frankie said he was going the wrong way. I said, "Look, the signs say 309, follow them." The Jr. Op., Harry, who was riding with Al, knew about this turn-around he told Al that we had goofed. As it turned out, nobody goofed as this is a more direct route, and cuts-off at least 20 miles.

While passing through Tamaqua, we contacted W3ZRQ, Al, who wanted us to stop at his QTH first, but we told him we would be down later.

So, we went down later and freeloaded the antenna, rotator and coax.

That evening, Al and his Jr. Op., K3NYX and XYL, Ev, K3NZD came up to raise the antenna.

Boys, do you want to know an easy way to raise an antenna in a hurry. Lend an ear. You use a 40' aluminum extension ladder. While closed, you attach rotator and antenna to the top-most section. Fasten guy-wires to the lower section, raise it up-right and guy. Then attach guy-wires to the top section, pull up and fasten guys. There's your antenna, 40' in the air in about 20 minutes.

After the antenna was raised we hooked up Al's G 50. The first party we hooked-up with was W3MXW, Joe. He returned our CQ by stating that he heard a beautiful carrier but no modulation. After a few minutes of the same, Al, K3LBT, asked if we pushed the button to talk. (He had the button taped in but it seems it came loose). This was at 9:27 P.M.

A couple of days later, Frankie received an OO card stating that he was on the air at 8:17 P.M. with no modulation. Needless to say, we got a big kick out of it and held a Kangaroo

Court to dismiss that OO. The reason; that certain OO, at 8:17 P.M. was outside helping to raise the antenna. Wait until I get my hands on that guy in Malvern, Pa.!

While there, we were asked by the SCM to help provide communications for the Fireman's Parade, Sept 6, and the Centennial Parade, Sept. 7 in Mahanoy City, Pa. This we agreed to do. Mr. Clyde Schaeffer, head of C.D. in Mahanoy City was in charge of communications for the parades. Through the efforts of W3ZRQ, Al Breiner, SCM, the following hams participated in the handling of the communications; K3PIY, K3IAC, K3KNO, W3DUI, K2NYX, K3UTJ, K3NZD, W3ZRQ, W3SAO, K3KVK, K3KNP, W3ORJ, K3HXS, K3QVI, K3SYC, K3KNL, and K3SLG. All equipment was covered by insurance. The city also supplied each car with two large signs to be posted on the side, reading, "Amateur Radio Emergency Corp Control Car".

For the Fireman's Parade, we were situated around the corner from the HQ station as an emergency unit in case a doctor or fire engine was needed.

The next day for the Centennial Parade we were situated at a crucial point. Before reaching our point we helped set up another location. We went to where he was supposed to set-up, but no one there knew about it. So we went to the next place with the same name. No one there knew about it either. So we called back to HQ's and they said they would put in a landline call to the location. We were only across the road from the location and heard the phone ringing. The poor fellow, he no sooner hung up the phone, and we were there to set-up. On our way to our location, HQ asked us to straighten out the modulation of another location. This we did. We finally reached our position, after delivering a party to his family, who also happened to be a ham from Chester, Pa.

After hooking-up to the 110 we were in business. The Policeman on the corner asked us to find out just when he was to stop all in-coming traffic, and at the same time one of the committeemen wanted another Policeman at the next corner. We put in the request to headquarters. The answer regarding the time, we got right away. In less than five minutes the extra Policeman was on the job.

Now we ask you to visualize the next. The city is only 1½ miles long, the parade route is only 3 miles and the parade is 8 miles long. We were situated at the half way point. As the head of the parade reached our point we were asked to hold it, and then re-route it up over the hill. Gee, it was fun to get out of the car and stop the State Police for a change.

Our job was to divert the marchers up the hill and line the floats-up down the street to fall-in as their division

passed. This was done so that the beginning did not meet the end before it left the starting point.

Because of the parade all traffic was diverted around the city.

A few sidelights: The street lights in the city are electric eye controlled. So, on Friday night, during the Fireman's parade, the spotlights on the fire engines put out each light as it passed.

Clyde Schaeffer, in charge for the City said he understood about asking permission to go to the "sand pile" but the request for 807's had him stumped. (Mahanoy City is the home of Kaier's Brewery).

On Friday Night we ate supper at 10:45 P.M. and on Saturday at 8:00 P.M. All supplied by Mahanoy City. But- we were on duty Friday at 5:30 P.M. and at 11.00 A.M. on Saturday.

We would like to point out that there were three mobile units in the parade. As the end of the parade reached each unit they fell in behind and received a big hand from the spectators.

Those "coal picken" stinkers tied tin cans to the bumper of the car and we left Mahanoy City with a bang.

No matter what W3ZRQ, A1, says, we returned all freeloader equipment.

K.U.I.

By W3HKZ, Ed Kushner

(From Electronic News, August 26, 1963)

SYSTEM TO GENERATE SPEECH FROM WRITTEN PATTERN SHOWN

WASHINGTON. - Melpar, Inc., Falls Church, Va., last week demonstrated a working model of a system for generating speech from written patterns.

The all solid-state device, called EVA for electronic vocal analog, is said to be the only one of its kind in the United States. It is adapted from a similar device in Sweden developed at the Royal Institute of Technology under Dr. Gunner Fant.

Melpar obtained a patent on the EVA system, designed by S. Joseph Campanella and former employe T.E. Bayston, as noted (EN, April 22)

One principal advantage of the system is the compression of speech for transmission, which daily becomes more important as the spectrum space becomes more crowded.

The model shown requires a bandwidth of only about 1/30th that of a normal voice communications band. Engineers at Melpar said that theoretically the bandwidth for this system could be as little as 1/1000th the width of normal bands used today.

The device has an articulation score of 75 percent which results in an intelligence figure of 90 per cent. A telephone, for comparison purposes,

has an articulation score of about 90 per cent. Melpar scientists hope to raise their system's articulation score to 85 per cent.

Melpar's Electronics Research Laboratory has been working on the device for several years in connection with Air Force and Army contracts for the study of speech compression techniques.

On the grid of EVA, Melpar engineers said it is possible to plot as many as 12 parameters, or types of information, about speech sounds. Among these are pitch, or frequency of larynx vibrations, and the formant frequencies or natural resonances of the vocal tract. The plots are inscribed on the grid in conducting ink.

MYLAR GRID USED

To recreate the plotted speech, a carriage is driven across the mylar grid. The carriage electrifies the traces, voltages varying according to the position of the traces on the grid. The 12 analog voltages thus generated are fed to a speech synthesizer which combines them to produce the voice.

A feature of the synthesizer is that the motion of the carriage may be slowed to a crawl, producing speech sounds slow enough so their "micro-structure" can be observed.

One objective of the research is to determine the invariant rules regarding the production of speech sounds to supply the information needed to recognize automatically the sounds which make up the language, it was said.

Realization of this goal would open the way to phonetic typewriters, and more importantly, speech communication with deep-space flights at low power levels, Melpar officials said.

While the power required to transmit a signal a given distance is not so important as long as the transmitter is located on earth, power requirements become very critical when the transmitter is located in a space vehicle, where weight and space are at a premium.

The narrower the bandwidth, the less power required to transmit a signal the same distance. Narrower bands also give a better signal-to-noise ratio, thus increasing intelligibility.

SIGNAL IN THE CORNER POCKET

From Technician-Engineer, August 1963

A new path for long distance radio signals that should expand and improve radio communications has been discovered by a Stanford University research engineer.

Dr. Robert B. Fenwick, a research associate in Stanford's Radioscience Laboratory, has found that signals can travel regularly around the world along the underside of the ionosphere-

that 150-mile-thick blanket of ionized air formed by the sun's radiation and lying approximately 50 miles above the earth's surface.

Dr. Fenwick announced his findings August 14 at a meeting of government and industry research experts at the Stanford Electronics Laboratories. His three years' work on the project, which earned him the doctoral degree in electrical engineering, was supported by the Office of Naval Research.

Ordinary long distance radio communications depend on bouncing signals back and forth between earth and the ionosphere in giant hops from the transmitter to the receiver. But such signals are often plagued by daytime weakness.

By using Dr. Fenwick's method two stations in daylight, when their direct path of communication is "blacked out" by such problems, may be able to use a round-the-world (RTW) path to contact each other.

Use of the method depends on finding a "tilt" in the ionosphere near each station that will give a signal the right bounce into its RTW path and then off of it to the receiver. It resembles a two-cushion billiard shot, not counting the multiple ionosphere-to-ionosphere bounces between the first ground-to-ionosphere (Transmitting) bounce and the final ionosphere-to-ground (receiving) bounce.

"Tilts" in the ionosphere occur daily and can be located on maps of these upper regions, Dr. Fenwick said. Such maps, based on average conditions, are prepared by the Central Radio Propagation Laboratory of the National Bureau of Standards.

Present radio circuits are designed on the assumption that the ionosphere is smoothly parallel to the earth's surface, and tilting is ignored. The new studies have shown the importance of tilts.

Prof. O.G. Villard, Jr., Radioscience Laboratory director who supervised the investigations, said Dr. Fenwick's work "has proved the importance of ionosphere-to-ionosphere reflections whose existence had been suspected but in a large measure ignored by other workers.

"Although these reflections are available over a given path for a limited time—perhaps five or six hours each day—a number of improvements are possible if one takes proper advantage of them," he said. "For example:

"1. Higher frequencies than those predicted by conventional means may be used, thus making more channel space available in the long distance radio spectrum;

"2. Transmission is less vulnerable to accidental or intentional interference along the ionosphere-to-ionosphere part of the path; and

"3. Transmission time can be lengthened for long distance paths and hence their communications reliability can be improved."

NEW PRODUCTS OF INTEREST TO HAMS

By W3NSI, Lynford Rowland, Jr.

1. Six Band Portable Receiver

Hallicrafter Co. has added a battery-operated, transistorized receiver to the line manufactured for sportsmen, hams, etc. The model WR-3000 is general coverage and tunes the low band marine freqs (200-400 Kc), 8.C. and short wave. A drum type dial is used so that only the range being tuned will be in view. Unit uses 10 transistors, 1 diode, 1 zener and 1 thermister. It is powered by 8 "D" flashlight cells.

2. Twin Diode Unit

Workman Co. has introduced a 7 pin plug-in unit to replace the 6al5 tube. Result—no filament drain or no heat.

Workman Co. Box 5397, Sarasota, Florida.

3. New Versions of 0A3, 0C3, 0D3

RCA is now producing VR tubes using the T9 glass envelope instead of the bulky ST12 we are so familiar with. They carry the same numbers but add the suffix-A. Voltage and current ratings are the same, but this size, which is the same as the glass 6V6, is much easier to fit into chassis layouts.

4. "B" Model Clegg Interceptor Receiver

A newer version of the Interceptor has just been introduced, and while the panel is just the same, so far as number of controls and appearance are concerned, some of these controls have different functions. First instead of a Noise Limit SW—there is now a pot to control this threshold level. The rectifier tube is out, being replaced by silicon diodes. The power supply also uses a new transformer and RC filter instead of the choke. The big change is the 10.7 mc filter which can now be switched out at will by switching to the broad position on the panel control. Last, there is now a 1 Kc vernier control which uses a varicap diode to adjust the osc. freq, a very handy thing to have when operating on CW or SSB.

Note—Information indicates that Clegg will soon come out with a 99'er for two meters. It will have the DC power supply built in, and in order to operate from 110 VAC it will be necessary to use

a converter providing 12 VDC output.

A Thor for two meters is reported to be on the way and should be available in the spring.

These two items should provide greater activity on that band, good news for W3IBH and other 2M types.

QRZ TWO METERS

By K3KKM, Elemr Smalling 3rd

Well, after waiting the better part of a year, the gents that "dig" after the rarer stuff have finally reaped the fruits of their labor. During the last three weeks (and especially the week of Sept. 16) the following states were worked F:8. on 144 Mc's-- Maine, New Hampshire, Vermont, Conn, R.I., Mass., Maryland, Va., W. Va., Kentucky, Georgia, Ohio, Delaware, N. Carolina and S. Carolina. All of these staes were worked by our own W3IBH, thirteen of them mobile-wise, and I know that most of the rest of us on two worked at least ten to eleven. Florida was heard on CW, however no contacts in this area have been reported so far. (Incidentally, I hasten to say that all the states mentioned above were worked via AM.) During this same period VE's 1 and 3 were heard and worked although, at this time, I have no calls available. ~~Living as we do in the Delaware Valley,~~ we are fortunate in one respect, and unfortunate in another. We have the advantage of working out in a good five hundred mile radius to Maine and S. Car., so the most we can brag about is 500 plus mikes, however, during the last few weeks, the Maine stations have been right in there with the N. Car. and W. Va. stations. A good deal farther. During this VHFers holiday, the most frequently heard stations from the N.E. were, K1NAY, Me., W1AJR, R.I., W1RJA, Conn., K1ODR, Mass., K2BNK, NNJ, W2LDQ, NYC/LI., W1BU, E. Mass. and W2ERL, E. NY.

From the Delaware Valley; W3IBH, Chas., W3EAO, Frankie, K3IUZ, John, K3UNZ, (Pottstown), K3YFD, K3KUB, Walt, K3DLA, Carl and yours truly.

Representation from the South lands during the contest was good, however I did not manage to get many of the calls of the boys excepting the two juicy contacts W3IBH made...W4PLS, N. Car. and W5GDD. The old faithfuls from below the Mason/Dixon were; W3LML, W3HWZ, W3YSF and a host of others whose calls we neglected to jot down.

NEWS ON TWO...The Oscar Transponder Satellite was to have been launched in the earlier part of July or Sept. so we hear from reliable sources, however launch has been postponed for another month or two for various and sundry reasons. This repeater should bring a large number of our spark gap

band friends up on two, for it will receive a call on one frequency and re-transmit the same signal a megacycle or two up the band.... a real selectivity trick, gentlemen. (The same antenna is to be used for simultaneous transmission and reception). One can only guess at the possible distances attainable on two meters. Imagine having your antenna a few hundred miles up. (and this is what it actually amounts to). The two most important attributes one will need will be perseverance and a broad converter.

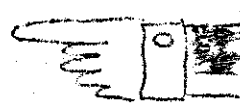
Another Two Meter special event of the month will be the Irish-American trans-Atlantic trials to be conducted the last two weekends in September. The Irish stations will call for five minutes and listen for ten for anything that might be lucky enough to creep across the water, however, it is our belief, and the belief of a great many more two meter operators, that this feat is well within the possible realm. (By the time this column is mailed, the results will be old hat) Good luck to all that tryand they say painting your antenna configuration green will add on a few DB's in that direction.

At this point we would like to welcome that old two meter tweeker back from school and wish W3LHF, Dave, good luck in unpacking and de-oxidizing the rig.

I welcome all comments and news quips from you gents and would appreciate hearing any news pertaining to two meters that we might pass along in the course of the month.

Until next month,

73 BCNU on 2,
Woody, K3KKM

T I R E D ? 

OF

Q R M

Q S B

Q S Y

T. V. I.

Q R P

ETC.

TRY
2 METERS!

(A PAID POLITICAL ADVERTISEMENT)

SWAP & SHOPPE

Conducted by, W3ZRR, Raymond Whitehead
4534 N. Smedley Street,
Phila., Pa. 19140
215- DA. 4-5910

WANTED: 2 & 6 Johnson Thunderbolt.

FOR SALE DX-100B
OR SWAP:

CONTACT: K3OZU, Roy S. Hildenbrandt
81 Main Street,
West Easton, Pa.

FOR SALE: H.V. Power Transformer,
Primary: 117 v.
Secondary: 2400-0-2400 v. @
500 ma.

2-866 m.v. rectifier tubes
Filament transformer for
866's.
UTC filter choke, 500ma
current.
6 mfd. 2500 v. filter con-
denser.

CONTACT: K3GAY, Donald K. Lauer
Muhlenberg College,
Allentown, Pa.

FOR SALE: Gonset Communicator III
for 110 VAC- 6 & 12 VDC
with handful of crystals,
A-1 condition. \$150.00
Will pay postage up to 100
miles.

CONTACT: W3DGX, Ted Gibson
19 W. Pottsville Street,
Pine Grove, Pa.

FOR SALE: CLEGG 99'er, including P to T
Mike \$99.00
Heath sixer, HW 29 \$25.00
HW 29A, P to T with mike
\$29.00
6 meter, 10 element beam
\$10.00

CONTACT: K3ORT, Bob Pabst
215- TU. 7-5683

FOR SALE: SX 99, mint condition,
with speaker \$85.00

CONTACT: W3SBE, Fran Hooper
215- MI. 6-7350

FOR SALE: G-50, JT 30, 5 el Hy-Gain,
3 ring Halo, 2 - 10' steel
mast. \$350.00

CONTACT: K3BPK, David Gindin
6504 Roosevelt Blvd,
Phila., Pa. 19149
215- JE. 3-1849

FOR SALE: DX100, mint condition
\$140.00

CONTACT: W3HGZ, T.E. Vawter
4032 Woodruff Road,
Lafayette Hill, Pa. 19444

FOR SALE: HE 45A, with HE 61 VFO,
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CONTACT: K3KTY, John Tate
520 Larkspur Street,
Phila., Pa. 19116
215- OR. 3-8840

FOR SALE; ANY REASONABLE OFFER

SSB Station complete with
mike including antenna,
Exciter, Gonset GSB 100,
linear amplifier, pair 813
patterned after B&W linear.
Two power supplies - one-
1400 V. Second has complete
parts for 3500 V - Supply
at 3.5-K.V.A. --220 V primary
complete with GR 20 Amp.
variac, Receiver - Collins
75A1 with B&W model 370 sig-
nal slicer. Gonset Hybrid
phone patch. Johnson SWR
Indicator. 53' galvanized
steel tower with prop pitch
rotator complete with selsyn
control indicator. 3 element
3 band beam. D 104 mike with
G stand. All interconnecting
relays, cables, switches for
complete operation. Instruc-
tion manuals for all. Many
spare parts. Would like to
sell the above as one item.

BC 221 with instruction man.
and calibration book.

BC 474 with instruction man.

Millen grid dip meter

Antenna scope (home brew)

50 odd assort. panel meters,
mostly Weston 3".

Exciter-Collins PTQ 829 B
output (home brew)

813 Amp. Pi Network output

two six foot relay cabinets

Assort. new resistors - 10
Ohms to 10 Meg. 1/2, 1, 2 watt
sizes (Allan Bradley)

Hundreds of assort. silver
mica, and transmitting mica
condensers

Large assort. of new tubes
receiving through 300 W plate
dissipation

Misc. variable condensers and
coils

Large assort. of construction
hardware, incl. switches, pi-
lot lights, fuse holders etc.

power supply components,
transformers, chokes conden-
sers.

Audio transformer

Precision resistors

1 KW modulator

Bulex 8 mm camera & projector

CONTACT: W3OJE, Robert Brunner
Moyer Road,
Chalfont, Pa. 18914
215-822-9659

X

PHILA COUNTY AREC PROGRESS REPORT

By W3UMK, Dick Berens, AREA

On Sept. 12th, the Phila. County AREC group had a joint meeting with Red Cross officials at the Southeastern Penna. Chapter HQS, 237 S. 17th St., Phila. Mr. William J, Fleming, presided and after introducing the Red Cross directors to W3ELI, George Van Dyke, the Phila. County EC.

George, or Van as Mt. Airy insists he be called since they have so many "Georges", (Psst, Dick; that's not the reason, it's because of similarity of call and handle, W3GLI, George and W3ELI, George.) discussed the national agreement between the American Red Cross and the American Radio Relay League concerning joint efforts and coordination. He emphasized that AREC must be asked for assistance, and stated their readiness to assist with parades, picnics and other types of public gatherings. The respective roles of the AREC organizations and the RACES personnel associated with Civil Defense, were touched upon; and Van urged his group to affiliate, individually, with the RACES organization through W3PST, Woody Haldeman, the Phila. County RACES Radio Officer.

K3WEU, Paul Behrmann, disclosed that the Central Phila. branch of the Red Cross had a six meter mobile unit in his car and that the Chapter HQS had a G-50 Communicator in operation on the third floor, using a four element wide spaced beam and rotor donated by K3ESL, Ben Gindin.

Mr. Fleming inquired if Red Cross personnel could hear the AREC group operating, if they had a shortwave receiver. Van replied that he doubted it, but said that their operations were on 50.2 mc., 145.2 mc., and 29.36 mc.

Miss Florence Fulton then explained that most Red Cross Services originally stemmed from disaster needs, and asked the AREC members' assistance in recruiting volunteers for the various Red Cross Programs, such as Motor Corps, from among their friends and relatives. At this point the groups split up, and Van commenced the AREC meeting. He reported that their group was now up to 93 and distributed a directory of the AREC personnel.

Van then touched on the ARRL's drive to emphasize the public service aspects of amateur radio, and added that W3DJV, Fred, was endeavoring to establish liaison with the Civil Air Patrol. W3SAO, Frankie, reported on the handling of the Mahanoy City Centennial Celebration. His description of how the hams, under the leadership of the SCM, W3ZRQ, Al Breiner, aided the police in coping with a four mile long parade on a main street only one and a half miles long brought forth many a chuckle. His droll report was interrupted by the call to refreshments served by the Red Cross.

THE COUNCIL OF AMATEUR RADIO CLUBS OF DELAWARE VALLEY

At the request of the World Affairs Council of Philadelphia, The Council of Amateur Radio Clubs of Delaware Valley will again set up K3UN during United Nations Week, October 20-26, 1963. Just as last year, the station will be set up on the main floor of Gimbels Dept. Store in center city, Philadelphia.

Arrangements have been made with a representative of the National Co. to use one of their new, NCX-3, SSB transceivers and the North Penn ARC is loaning the Council their Gonset G-28 Communicator for 10 meter operation. It is planned to operate dipoles on 20 and 40 meters, and a vertical on ten. Eric, K3GNJ, is loaning the vertical and the Phil-Mont antenna committee will install the antennas.

The following hams have been active in planning and arranging for this year's operation of K3UN.

W3AYG, John Harris, Mt. Airy VHF Club
(Council President)
W3VSD, Al Ciampaglia, S. Phila. ARC.
K3GNJ, Enos Bartol, Phil-Mont Mobile RC.
W3GTC, Carolyn Currens, North Penn ARC
Penn-Jersey YL
W3HFY, Hal Grace, Mobile Sixers
W3UMK, Dick Berens, Delco Radio Club.

It's good to note that both the RACES Set-Up and the Council is once more back in action.

WHAT HAPPENS

K3HJA, Earl, has his right arm in a cast from the elbow as a result of a bundle of pipe falling on it at work. All of the ligaments are crushed and he has no feeling or control of his hand, therefore he is unable to get on the air from home as he does not have a toggle switch arrangement. He is able to operate Mobile.

While on vacation, we learned that K2QOS, Mike, was rushed to the hospital for an emergency appendectomy. He is now at home and back to work doing fine.

Hey, W3KKN, Ernie, how come you were on 220 during the six meter net and then K3IPM Stan, took over as net control for 220 on the same night?

K3PYB, Steve, harmonic of K3PXT, Carmen, sorry we didn't mention your call in the write-up about the trip to Delaware, Didn't know you had one.

Oh, yes, K3PXT, Carmen, welcome to AREA. If we don't get an article once in a while, Mama will spank.

W3NSI, Lyn, sorry your article was not in the last issue, received it after printing.

K3JJZ, El, says that at the SJRA Hamfest if you wanted to meet Ruth, XYL of K3ABK all you had to do was follow the chain attached to Sam. It took Sam 33 years to get her to go to the Hamfest and then he had to give her tranquilizers. (I didn't say it, Sam, El did.)

The following Pack Rats were in attendance at the SJRA Hamfest on Sunday, Sept. 8, 1963;

K3PXT, Carmen; K3IUU, Bert; K3JJZ, El; K3HWZ, Bill; K3LOM, Harry; W3OR, Alan; W3CL, Harry; K3EPB, Howard; K3AFT, Joe; K3IFH, Ed; K3DUW, Alan; K3HSS, Charlie; K3GAS, Doc; K3IGX, Dick; K3IPM Stan; K3GOZ, Herm; W3CDP, LOU; K3LBT, Al; W2SXO, Bill; W3BVR, Ted; K3ACR, Rich; W3MXW, Joe; W3BRU, Frank; W3CFS, Ed; W3IBH, Charlie; K3QBY, Jim; K3ABK, Sam; W3HFY, Hal; W2EIF, Jo; W3BYB, George and K3RCV, Jack

W3NL, Andy, Editor "Auto Call"; nice to know you missed me at the Atlantic Division ARRL Convention. Passed your messages along. Got a message for you from VU2GV, G V Sulu of the Amateur Radio Club in India. He would like to know what happened to Auto Call he no longer gets it?

COMING EVENTS

- OCTOBER: 2 PHILA. COUNTY AREC MEETING
- 5 & 6 ARRL, AREC SIMULATED EMERGENCY TEST
- 9 DIRECTORS' MEETING
- 12 SYRACUSE VHF ROUND-UP
- 16 GENERAL MEETING
- 20 to 26 U.N. WEEK

HIGHLIGHTS OF DIRECTORS MEETING OF SEPTEMBER 11, 1963

The Directors Meeting was held at the QTH of K3LOM Harry, at 8:00 P.M.

W3MVF, Dave, the Treasurer, stated that we now have a signed contract with the center for our new meeting room. The meetings will still be held at the same place, but in a larger room.

K3IUZ, John, the Contest Chairman gave his first progress report. It was moved and seconded that the January Contest be dedicated to the memory of W3ASD, Karl.

K3GAS, Doc, gave the report of the Picnic Committee and we did not go in the red.

W3CL, Harry, Membership Chairman, presented the request of K3GAY, Don, to be placed on the Retired Member List for personnel reasons. It was moved and seconded that his request be

granted. Mark your membership books accordingly.

W3CL also made a progress report on the Campaign activities for W2PPS, Fred Kaffer and W3HFY, Hal Grace for Vice-Director and Director Atlantic Division.

Aside to W3MVF, Dave; sorry we omitted you and Mickey from the list of personalities at the QTH of W3HKZ, Ed. Good to hear that Mickey is home from the hospital and hope that everything straightens out so that she will not have to return.

HIGHLIGHTS OF GENERAL MEETING HELD ON WEDNESDAY, AUGUST 21, 1963

The General Meeting for August was held at the QTH of W3KKW, Ernie.

A letter of resignation was read from K3KMN, George Gakoumis who now resides in Texas. His new QTH is;

K3KMN/5, George Gakoumis
10222 Shadow Wood,
Houston, Texas 77043

It was also voted that he continue to receive "Cheese Bits".

The following two applications for membership were presented for a vote; K3DLS, Carl Croce and K3PXT, Carmen Diodati. The vote was cast in the affirmative.

Information for your membership book will be found on the last page.

LATE SWAP & SHOPPE

FOR SALE: 5 watt Transceiver HE-35
12 v Power Supply for above
3 ring Halo
Will bargain

CONTACT: Bob Bailey
215- RA, 5-6460

FOR SALE: Central Electronics 200-V
AM/FM/FSK/CW/SSB \$675.00

Hammerlund HQ-140X 500 kce-
30 mcs receiver complete
with 100 kc xtal calib. &
and matching speaker.
\$150.00

Polycom 62-B Six & two
meter transceiver with built
in 110V AC and 12V DC sup-
plies; complete with power
cables and mike. \$275.00

Gonset III Communicator
(2mtrs - CD - 12V) complete
with 4 xtals, mike & power
cables \$175.00

Gonset II Communicator
(2 mtrs - 4 xtal sockets)
6V supply-complete with
power cables & 4 xtals
mike included. \$125.00

(Next page)

Gonset VFO & Audio Pre-Amp
for above Communicator

\$35.00

(Entire package with connecting cables, etc)

\$150.00

DB-23 Pre-selector (10-80 mtrs)

\$20.00

Bogan PA System (20 watts)

\$20.00

All units in excellent cond.

CONTACT: W3DJA, John Mahoney, Jr.
6904 City Line Avenue,
Phila., Pa. 19151
(DAY) 215- GR. 6-4680
(NIGHT) 215- TR. 7-1008

(EDITOR'S NOTE: Regarding "Swap & Shoppe" items; This is a service for all hams who wish to avail themselves of it, but we must insist that each ad be complete with call, Handle and address, otherwise it will not appear. We do not have the time to look each one up in the Call Book.)

HIGHLITES OF GENERAL MEETING HELD ON

WEDNESDAY, SEPT. 25, 1963

Starting January 1, 1964, dues will be \$6.00 a year instead of \$5.00.

W3HAB, Monroe Powell, was appointed the new Refreshment Chairman.

Application for membership of W3MFY, Preston Funk was presented for a vote. The vote was in the affirmative. Information for your membership book is on the last page.

Congratulations were offered to K3EHQ, Jim, on successfully passing his test for General Class License.

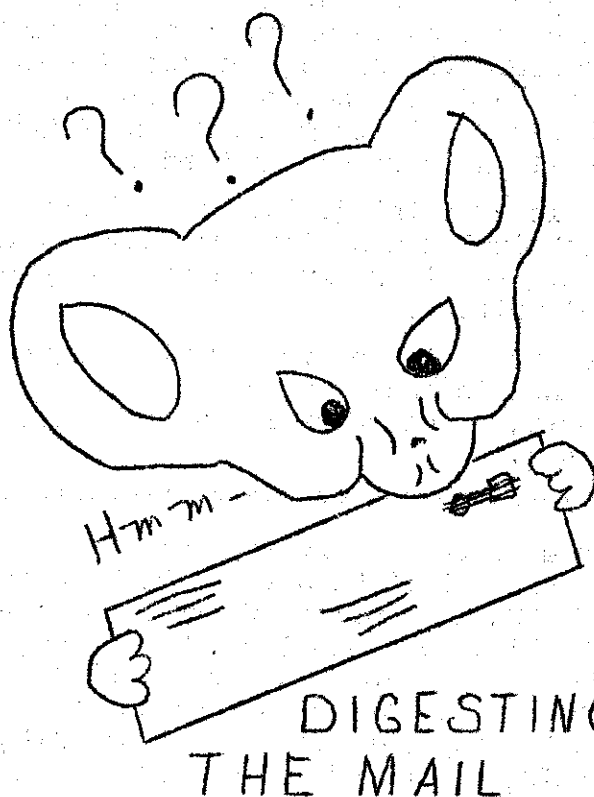
We were sorry to hear that the mother of W3MVF, Dave, is in a critical condition after suffering a heart attack and heart failure. We wish her a speedy recovery.

ARRL NATIONAL SIMULATED EMERGENCY TEST

OCTOBER 5 & 6, 1963

All members of RACES And AREC are urged to participate in this test so as to familiarize themselves in the method of handling emergency traffic. By the time you read this, hurricane Edith will either have hit, or swerved out to sea. She has already knocked out communications on the Islands of St. Lucia and Martinique.

Another example of where emergency communications would be needed is shown in the following headline from the Phila. Inquirer of Sept. 26, "GIRDER CUTS OFF 2000 PHONES IN SOUTH PHILA." That is only one section of Phila. Fortunately no emergency communications were needed, but 2000 phones could cut off many a smaller community in the country.



THE AMATEUR RADIO CLUB

POST BOX 53
BANGALORE, 1, INDIA

15th July 63

Mrs. Helen Brick,
Editor "Pack Rats-Cheese Bits"
Mt. Airy VHF Radio Club, Inc.
Phila.

Dear Mrs. Brick:

We sincerely thank you for kind introduction you have written in your "Cheese Bits", Vol. IV, No. 2 and also in the AREA Bulletin. As a result of your writing we got, so far, two issues "Q-Match" of Warren Amateur Radio Assn., and we hope we will get some more magazines for swap.

Apart from your "Cheese Bits" our club was in regular receipt of "Radiation" of Fry Radio Club, Chattanooga, Tenn. We found both your magazines quite interesting and informative.

We have also received two issues of AREA NEWS Release and Mar. '63 membership list of AREA. We found the address of AREA in one of your "Cheese Bits" and sent a copy of our 1st issue of SIRAN to them along with the copy sent to you. So also we have sent the copies of second issue of SIRAN to most of the club journals mentioned in AREA list. Hope they will reciprocate in due course.

We look forward for the continued cooperation from your club in our efforts to get more friends for our club in your country. You please pass on the 73 of the members of our club to the members of your club and if there is any thing our club can do for any of your members, it will be a pleasure. If any of your members are interested in Indian stamps, we can send them.

Our 73 to you and to your OM, W3SAD
Cheerio.

Yours Sincerely
G.V. Sulu, Secretary

In a personal letter from GV, in which he addresses me as "My dear Mother Rat" he requested me to find out if someone would be kind enough to write a column for their publication, SIRAN, entitled "News From W Land".

He is also interested in becoming a Technical Journalist and would appreciate receiving information on Technical writing.

We have a lot of information regarding hamdom in India and also on life in India, which we will save for another issue.

We were very sorry to read of the passing of W8WE, Bart Geib, Director of AREA and editor of "W8FT News" for the Findlay Radio Club, Van Buren, Ohio. He passed away quite suddenly on July 31, after just completing the MARS Net. Our sympathy to his XYL, W8OTK, Alice and the members of the Radio Club.

From THE EVENING BULLETIN, Phila. Pa. Wednesday, Sept 25, 1963

IN OUR TOWN

By James Smart

Two old four-story row houses on Pine St. near 16th bear signs which say Philadelphia Wireless Technical Institute.

The place is unimpressive on the outside, but I was impressed when someone told me the school was founded in 1908.

I thought the only program on the wireless in 1908 would have been Dot and Dash Hour, Starring Guglielmo Marconi.

Not so, said Harry A. Raske, president of the institute, when I stopped in.

"There was mostly shipboard equipment in those days," Raske said. "Our founder, the late David Heilig, was a shipboard radio operator.

"He was staying at the Bellevue-Stratford between runs, and a couple of young fellows asked him to teach them radio code.

"They told their friends, and he found himself in the school business, purely by accident.

"Later Joseph C. VanHorn, who is now chairman of the board, joined him. They rented a place on Ridge Ave. and then at Broad and Cherry, and moved here in 1921. The school has been a non-profit educational corporation since 1945."

Raske took me into the hall and showed me a small museum of old tubes, condensers and radios dating back to World War I.

He showed me a 1926 Radiola with a wooden case and a loop antenna built into a revolving panel in its door.

The instruction sheet said, "The selectivity has been carried to the theoretical limits of science, beyond which it is not necessary-or desirable-to go."

Then Raske took me into the institute's classrooms and laboratories. It was an impressive tour, although I'm not sure what everything was, not knowing a grid dip oscillator from a drug store tube-tester.

"This is our beginning laboratory in here," Raske began, leading the way into a room lined with radio equipment. "Here the students learn all the basic laws, such as Ohm's and Kirchoff's laws."

He showed me devices to demonstrate how computers work; the code classroom ("Now we give code lessons after regular school hours for those few who want it."); special component circuits which can be fitted together to show how they interwork; a complete receiver in which every tiny part could be seen and removed for demonstration purposes, and other teaching devices.

I followed through television and transmitter labs, through oil-burner and air-conditioning shops, past the studios of the school's extra curricular FM radio station (91.7 on your dial) and ham transmitter, and up winding stairs to the radar lab.

William Wayne Zerfing, Raske's assistant, started an antenna rotating on the roof and turned on a radar screen.

"That's the Drake Hotel," he said, pointing to the morass of lights, "and these are some tanks in South Philly..."

It's amazing what you can find in a couple of old row houses.

The following two articles are reprinted from NAVAL COMMUNICATIONS BULLETIN, No. 73, 1963, with permission granted to all AREA Editors by LCDR. C.R. Winnette, USNR, Chief, Navy MARS.

MR. ENOMOTO HONORED FOR VITAL WARTIME WORK

David Kiyo Enomoto, of Kahulue, Maui, Hawaii, ham radio operator, patriot, and good citizen, has received Navy recognition for unusual service to his country nearly 22 years ago, in the critical early days of World War II.

After the Pearl Harbor attack, Mr. Enomoto operated his own high-powered amateur radio transmitter and receiver to enable Naval Air Station Puunene, on Maui, to communicate with Pearl, the U.S. West Coast, Corregidor and the Far East. He re-established radio contact between Puunene and the outside world, staying on the job for

(next page)

15 months before Navy and Army set up adequate communications on the island.

Mr. Enomoto's vital contribution to the war effort was shrouded in secrecy at the time, and remained unpublicized until it was recently brought to the attention of the Chief of Naval Operations and the Office of Naval Communications.

On 10 July, Maui's "No. 1 ham", with approximately 100 friends and relatives in attendance, received a certificate designating him an Honorary Naval Communicator, and an accompanying letter of citation signed by RADM B.F. Roeder, USN, Director, Naval Communications. The presentation was made by CAPT. G.T. Ferguson, USN, Chief of Staff, Fourteenth Naval District.

After calling attention to Mr. Enomoto's volunteer wartime work, ADM Roeder's letter continued, in part; "Since those dark days you have continued to serve your country by being an exemplary citizen, an active participant in the civic activities of your community and by public service through amateur radio...."

"Your use of your amateur radio privileges in the public interest is in keeping with the acts of patriotism and humanity that have become legion with you and your associated hobbyists."

(ED Note; And Representative Holland wants legislation passed to put the ham off the air simply because the faulty TV sets of his constituents intercept ham signals. God forbid that the day should come when these same people need the services of the ham. The ham, being the sort of person he is, will forget how badly he was treated, and will be in there pitching.)

HISTORY OF THE INTERNATIONAL MORSE CODE

By LTJG Robert W. Jones, USN, Naval Security Group Headquarters, Washington D.C.

In 1832 while returning to the U.S. on the packet Sully, Samuel F.B. Morse a well know portrait painter, participated in a discussion on the speed of an electric current through 100 feet of wire. Morse suggested that if the current's travel was instantaneous, it could be used to convey intelligence for any distance. The idea took deep hold on Morse, and he immediately made sketches and drafted the first of several "Morse Codes."

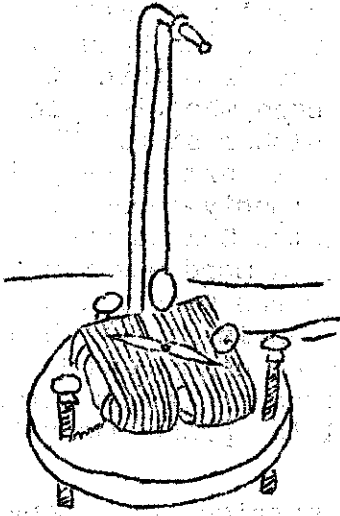
Perhaps unknown to Morse, other inventors in Europe were working to develop electric telegraphs to replace the relatively slow visual telegraph that had been in operation as early as 1796, when a visual telegraph was in operation between London and Dover

The most efficient visual signalling system at that time was the method invented by Colonel Paisley of France in 1822. The towers of the Paisley semaphore were placed from three to five miles apart; each was visible to the nearest on either side. The positioning of the two arms conveyed letters or words. Twenty-seven of these towers connected Calais and Paris (152 miles). A word was transmitted through in three minutes, a sentence of ten words in half an hour. Probably due to large unpopulated areas and the distances between large cities, the visual telegraph was not used in America.

In 1809 Doctor Sommerring of Germany invented a novel type electric telegraph, using twenty-seven wires between two signalling stations. The wires terminated in a small, water-filled reservoir at the receiving set. Letters of the alphabet were indicated by energizing the wires representing the letters of the text to be transmitted. The wire termination in the reservoir bubbled and signalled to an alert and watching operator the letters being transmitted. Sommerring's telegraph was never in commercial operation, although it attracted much attention in Europe.

In 1811 Schweigger of Nuremberg suggested that only two wires be used and that the duration of the bubbles and the spacing be used to convey the letters of the alphabet. This is possibly the first suggestion of a telegraphic alphabet for signalling over a single electric circuit.

Baron P.L. Schilling of Russia saw Sommerring's telegraph in operation in 1810. From that day, Schilling's favorite study was electricity. During the years until 1825, Schilling divided his time between a diplomatic career and his experiments with the electric telegraph. Schilling's method of transmitting intelligence used the magnetic field surrounding an inductance to deflect a magnetic needle. Line current in one direction deflected the needle and turned the white side of the round card suspended on the string toward the operator. Reverse line current moved the needle in the opposite direction and showed the black side of the card. In the code used by Schilling, the letter b indicates the black side of the card, w the white side. The line current had three states; normal, reverse and off. Only normal and reverse currents were used for signalling. In the Schilling alphabet, if the black is assumed to be a dot and white a dash, some of the letters (A,E,I,N,T) are the same as the present International Morse Code. Baron Schilling died in 1837 before he could construct the telegraph line that had been ordered built by Imperial decree. Schilling's design influenced European telegraph design for many years. Many needle telegraph systems were used in Europe.



Early needle telegraph receiving instrument designed by Baron Schilling of Russia. Receiving operator read the message by watching the round card suspended above the needle.

Gauss and Weber of Germany developed a code to be used on their $\frac{1}{2}$ mile telegraph line. The Weber-Gauss indicating instrument is interesting in its size. The movable bar magnet was 18 inches long and had a 3 x 5 inch cross-section. The huge 100 pound magnet was mounted in the center of an inductance, wound with 3000 feet of wire. A small mirror was attached to the magnet. The slightest movement could be detected by watching the mirror through a telescope ten feet away. This system did not find wide usage on European telegraph circuits, but the principle was adopted years later by Sir William Thompson when he developed instruments used to detect very weak impulses on the first trans-Atlantic cables.

The needle telegraph continued development in Europe. Many lines were installed, and the system was in commercial operation prior to the practical use of Morse's system in America.

S. F. B. Morse designed his first telegraph to be, as he called it, an "Electro Magnetic Printing Telegraph." Morse's system used the new electromagnetic theory of Joseph Henry, an American who did extensive work in the field of electromagnets and translated the off-on impulses of keyed telegraph lines to marks on a moving strip of paper.

Morse's first telegraphic code was a dot/space combination that was capable of transmitting one through zero and a space. One and six were each one dot. The numerals were discriminated by the space following the last dot of the numeral. Using one dot as the basic unit, the numerals one through five were each followed by a space of three units. The numerals six through zero were each followed by a space of five units. The space was six units. Morse was close to the system of Baudot and his uniform length, baud-based code.

Since spacing was an important part of Morse's code, the element of human error was removed by using a mechanical method of transmitting the dots and spaces of the code. The metal bars with teeth were attached to a portruler and pushed under a pin that

lowered two wires into mercury cups, sending the dots and spaces of the message. Such a system required that each message first be reduced to numbers, using a complete dictionary compiled by Morse. At the receiving terminal, the numbers were translated back to English. Morse continued his tests for several years and ultimately dropped the number code system. The first Morse alphabet is believed to have been developed in 1835.

In 1837, while Morse was demonstrating his telegraph apparatus in New York, Alfred Vail became interested in Morse's telegraph and entered into a partnership with Morse. Vail obtained financial backing and the two inventors refined and developed telegraph instruments.

In January 1838, the amended Morse alphabet was introduced and used to send a message through ten miles of wire at a public demonstration. In the amended Morse alphabet, G and J, I and Y, S and Z are each represented by one dot and dash combination. The correct letter had to be determined by context. The ampersand (&) was commonly used then, even in formal writing and was included as one of the characters of the alphabet. The Morse ". . ." was assigned to represent it. This character is still extensively used by radiomen for "and."

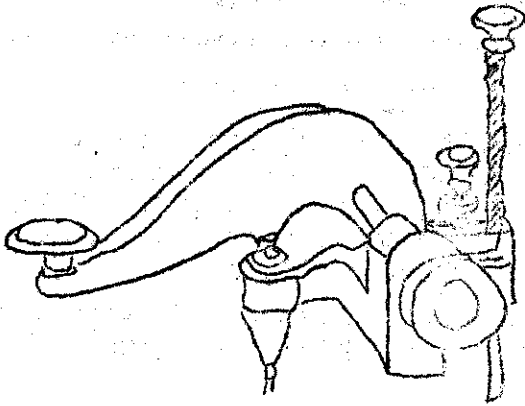
The amended Morse alphabet has been attributed to Vail, who, it is claimed worked out the dot, dash and space symbols for the Morse code after watching a printer at work over a font of type. The most frequently used letters were in the largest compartments in the printer's case, and Vail, therefore, made the most frequently used letters the shortest in dots, dashes and spaces. Separate dot and dash equivalents were later worked out for the J, Y, and Z.

Morse's alphabet had inherent faults. Several of the letters had spaces within them and were easily mistaken for two other letters. The I, L and zero were each represented by one dash, but dashes of different lengths. In the spring of 1844 Morse and Vail, after an unsuccessful attempt to install the line underground, were testing the overhead line between Baltimore and Washington, using a Morse register.

In May 1844, about two weeks prior to sending the famous "What Hath God Wrought" message, Morse wrote a letter to Vail about some of their tests on the new telegraph line. "Everything worked out well yesterday, but there is one defect in your writing (sending). Make a longer space between each letter, and a still longer space between each word."

The trouble hasn't been limited to the inventor of the telegraph. Every beginner, as we all know, runs the letters and words together.

Morse's instruments spread over the continent. The early telegraphers sent by hand, but read the tape visually after the dots and dashes had been printed by the register. After the telegraphic registers had been in use for several years the operators discovered that they could read the clicks of the armature moving up and down as it actuated the writing pen. Morse opposed reading by sound, but the operators continued reading by ear, and soon the registers were reduced to only the electromagnet and movable armature to make a readable click.



Early Morse Transmitting Key

In Europe the needle telegraph continued in use. Only Germany seemed interested in the Morse-type telegraph. The first European line using the Morse system was installed in 1848 between Hamburg and Cuxhaven. One of the officials of the line, Gerke, introduced some changes to the American Morse Code that eliminated the troublesome spaces within characters and standardized the dot as the basic unit and the dash three times the length of the dot. Gerke also constructed a new set of dot-dash combinations for numerals and punctuation.

In 1851 the German-Austrian Telegraph Union met to standardize telegraphic communications between the two countries. The telegraphic union agreed to use, effective from 1852, the modified Morse alphabet worked out by Gerke in 1848. This alphabet was named the Austro-Germanic Morse Alphabet.

Morse's original alphabet continued to be used in America and was known as American Morse. Although Morse had only devised an alphabet, the ampersand and ten numerals, punctuation evolved, and by 1855 three were in use.

One story of the first telegraphers having no error sign or question mark, spelled out the work "DAMN" when an error was made during sending. This was soon shortened to "DN" and later contracted to "-...-". The dot-dash combination -...- became the American Morse symbol for question mark and error sign.

The Austro-Germanic code continued to be used in Europe and was later referred to as Continental Morse Code. Morse systems slowly replaced all others in Europe and Continental Morse Code became the common telegraphic

code in Europe.

When wireless telegraphy was born in Europe, the first wirelessmen used Continental Morse Code. American wireless operators used American Morse

The book "Instructions for the Use of Wireless Telegraph Apparatus" By LT J.M. Higgins, USN, 1903 Edition, lists three codes that could be used for communicating. The Navy Code Alphabet had been the U.S. Army and U.S. Navy "General Service Code" and had been used for telegraph and visual use.

Instructions to Navy wirelessmen of 1903 left it to the whim of the operator which code to use: "Any dot and dash code may be used for signalling. The Continental, Morse the Navy Signal and the American Morse are given. The American Morse is not suitable for a tape record owing to the spaces in the letters." Wireless receivers of that era used coherer detectors that printed dots and dashes on paper tape.

By 1912 the Navy had dropped the Navy Signal Code and made Continental Morse the official Navy telegraphic code. The following is quoted from the Manual of Naval Electricians, 1912 edition: "For official use between ships of the Navy and between them and Naval shore wireless stations the Continental Morse Code is used. Commercial shore stations in the United States coasting vessels use the American Morse. It is hoped that the use of wireless telegraphy will eventually bring about an international agreement and provide a universal code. This will facilitate intercourse between United States ships and those of other nations and relieve operators of the necessity of learning two codes"

The Navy's hopes were fulfilled. Soon after 1912, the transition took place to complete usage of Continental Morse Code for radio communications. However, it was not until the International Telecommunications Union convention of 1927 in Washington that the Continental Morse Code was officially adopted as the International Morse Code. The code as adopted was basically the same as the Austro-Germanic code set up by Gerke in 1848 and adopted by the Austro-Germanic Telegraph Union in 1851. A minor revision was made, following ITU agreement, in 1937, when some of the punctuation marks were changed.

American Morse is still in use on the few remaining manual telegraph lines in the United States, but it is slowly being replaced by teletypewriting machines. The International Morse Code is still extensively used in radio communications.

Although machines are handling all the heavy traffic loads, the good operator with the selective ear, pride in his fist, and the ability to do what machines cannot do will always have a place in U.S. Naval Communications.

ABOUT THE AUTHOR: LTJG Robert W. Jones enlisted in the Naval Communication Reserve in Canton, Ohio, in 1937....
..LTJG Jones has been a licensed amateur operator since 1934, and now holds call letters W6EDG and K3RXD. In 1956, while serving as an instructor at CT School, Imperial Beach, Cal., he copied plain language at 52 WPM to win first place in a code-copying competition among members of the school staff.....

OPEN HOUSE

COME ONE! COME ALL! The doors will be wide open at "HAM" BUERGER'S!

WHEN? SATURDAY, OCTOBER 26

WHERE? RICE'S MILL ROAD & GLENSIDE AVENUE, WYNCOTE, PA.

WHY? TO SAY THANK YOU FOR YOUR PATRONAGE AND INTRODUCE YOU TO W3GJF, JOHNNY LLOPES (as if he needs any introduction). TO SEE THE NEWEST HAM GEAR AND ACCESSORIES. TO MEET THE FACTORY REPRESENTATIVES and JUST TO HAVE A GOOD TIME!

DON'T MISS IT! PLENTY OF REFRESHMENTS! PLENTY OF FREE PARKING! PLENTY OF PRIZES!

NEW STORE HOURS: MONDAY THRU FRIDAY
9 to 9

SATURDAY

9 to 3

PHONES: 215- CA. 4-1740
215- TU. 7-7350

(Johnny promised me that he would permit Ham to have the third Wednesday evening off so that he can attend the club meetings, hi!)

HAMS GET TOGETHER AT "HAM'S", ON SAT.
OCTOBER 26!

NATIONAL CAPITOL VHF SOCIETY INC.

CERTIFICATE

Certificate issued free for working 10 members. Working 10 is quite hard in this area. The members are;

W3GQH, K3EIW, W3CJT, K3CRD, W3LKU,
K3TZI, W3GCO, W3JNE, K4LZP, K6RCW,
W3NG, W3DTC, W3ZSR, K3NDG/4, K3RPI
K3CUD, W3SEG, K4CBY, K3CPA, K1DAA,
K3DDP, K3WSQ, K3STM.

Send information to :K3TZI,
6917 Varnum St.
Landover Hills, Md.

You will find these boys on 6 as well as on 2 meters, plus 220 and 432 Mc.

(Thanks, Ralph. It took quite awhile but we finally got the list, hi!)

Speaking of certificates, we have a request to make of the members. When someone requests a list of the Pack Rats and rules please refer them to

W2EIF, Jo the chairman. He has all of the sheets. When you refer them to us we must send the request to Jo, or sit down and type up individual lists.

By the way, our number 1 "Worked 30 Pack Rats All Mobile" is W3OR, Alan Vincent. He made his thirtyeth contact on the 14th of September. It was W3CL.

Since W3OR is now a Pack Rat we have changed the phonetics of his call from "OLD RELIABLE" to "OLD RAT".

We now hear that W3HKZ, Ed, has his beams up at the new QTH.

JUNE "QSO PARTY"

Our own K3IPM, Stan, came in No. 1 as the Highest Scoring single operator with a total score of 25,404. Making him No. 1 in the country as well as the Eastern Pa. Section.

No. 4 in the Eastern Pa. Section was our own W3ELQ, Walt with a score of 4092.

W3CCX, the Club station is the No. 1 multi-operated station in the Eastern Pa. section with a score of 28,050, for the second year running.

(Stan was also No. 1 in the "CQ VHF Contest for June.)

QSL CARDS for \$6.00 PER THOUSAND!

The Monitor Magazine is proud to be able to perform this service for our hobby.

These attractive QSL cards are printed in two colors and were designed to never become obsolete. A blank space is provided for printing or lettering in your call, QTH and County. And with a rubber stamp you can print as many as you need when you want them. In this manner none of your QSL cards will become useless in the event you change your QTH!

Send S.A.S.E. today for a sample or send \$6.00 for your thousand and get started "printing your own" QSL's.

Send to: The Monitor
P.O. Box 4133
Dallas, Texas 75208

W3ZRQ, Al Breiner and his XYL, K3NZD, Ev became the grandparents of a boy on Sunday, August 11. They received the news upon their return home from the Pack Rats picnic. Congratulations Grandpa and Grandma.

BELATED BIRTHDAY GREETINGS TO AREA

On August 7 AREA (Amateur Radio Editors Association) became 2 years old. The membership numbers 98 with members all over the U.S, Canada and Germany. Some of the members are listed in "Who's Who" of Amateur Radio. The members range from Editor to Senator.

MEETING NOTICES

OCTOBER 2

PHILA. COUNTY AREC MEETING

The monthly meeting of the Phila. County AREC will be held on Wednesday, October 2nd at 8:00 P.M. at the Gilbert Spruance School, Levick and Horrocks Streets. The order of Business will be the preparation for the SET of October 5 & 6.

OCTOBER 9

BOARD OF DIRECTORS MEETING

The Board of Directors meeting will be held on Wednesday, October 9 at 8:00 P.M.

The Corresponding Secretary will send notices to the members concerned announcing the "WHERE". It will also be announced on the nets.

OCTOBER 16

GENERAL MEETING

The General Meeting will be held on Wednesday, October 16 at 8:00 P.M. at the West Oak Lane Jewish Community Center, Sedgwick and Thouron Streets, Phila., Pa.

FOR YOUR MEMBERSHIP BOOK

CHANGE OF ADDRESS

K3GAY, DONALD LAUER
Muhlenburg College,
Allentown, Pa. 18104

NEW MEMBERS

K3DLS, CARL CROCE
6118 N. 8th Street,
Phila., Pa. 19120
215- Ha. 4-6884

K3PXT, CARMEN DIDDI, XYL, SUNNY
93 N. Hilltop Drive
Churchville Pa. 18966
215- EL. 7-6299

W3MFY, PRESTON (PRES) FUNK
4860 Magnolia Avenue,
Trevose, Pa.
215- EL. 7-1400 (Business)

We wish to offer our heartfelt sympathy to W3MVZ, Dave, and his family on the passing of his mother, Friday, Sept. 27.

God be with you in your time of sorrow.

MEETING NOTICE

W3CL HARRY B. Stein
2087 Parkdale Ave.
Glenside, Pa. 19038

OCT 1 1963

17161
PHILA. PA.
829 W. FISHERS AVE.
"PACK RATS CHEESE BITS"



MEMBER
OF



AMATEUR RADIO EDITORS' ASSOCIATION