

PACK RATS CHEESE BITS

VOLUME IV

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

NUMBER 3

(50.2, 144.2 and 221.4 Mc.)

W3CCX

(Meeting notices, last page)

JUNE 1961

*The A R R L and You! After reading
the following, and if you are not a member of the
A R R L, don't you feel ashamed?*

OFFICIAL BULLETIN NR 799 FROM ARRL HEADQUARTERS
WEST HARTFORD, CONN. MAY 8, 1961
TO ALL RADIO AMATEURS:BT

THE ARRL BOARD OF DIRECTORS HELD ITS ANNUAL MEETING AT ANAHEIM, CALIF., ON MAY 5, 1961. ARRL WILL REQUEST FCC RULES PROVISIONS FOR SLOW SCAN FACSIMILE IN VOICE SECTIONS OF THE 10 AND 15 METER BANDS, AND TO ELIMINATE THE REQUIREMENT FOR CW IDENTIFICATION BY RTTY STATIONS.

THE BOARD VOTED TO SUPPORT FCC PROPOSALS NOW PENDING TO PERMIT CONDITIONAL CLASS EXAMINATIONS FOR CIVILIANS OVERSEAS, DOCKET 14025, AND TO PERMIT WORLD WIDE MARITIME MOBILE OPERATION ON 14 MC, DOCKET 14026. THE GENERAL MANAGER WAS INSTRUCTED TO MAKE STRONG REPRESENTATIONS TO GOVERNMENT AGENCIES TO EXPEDITE ENACTMENT OF RECIPROCAL LICENSING AGREEMENTS WITH FRIENDLY COUNTRIES.

THE BOARD ALSO REQUESTED AN INTENSIFICATION OF EFFORTS TO OBTAIN INCREASED OPERATOR PRIVILEGES IN 1800 TO 2000 KC, AND TO EXPLORE A POSSIBLE RELAXATION OF LOG KEEPING REQUIREMENTS FOR MOBILE STATIONS. THE BOARD EXPRESSED ITS SUPPORT OF BILLS IN CONGRESS TO ELIMINATE THE REQUIREMENT FOR A NOTARY PUBLIC STAMP ON AMATEUR LICENSE APPLICATIONS AND TO ALLOW EARLIER RENEWALS OF AMATEUR RADIO LICENSES.

THE DIRECTORS RESOLVED TO URGE U.S. AMATEURS TO KEEP THE TOP 15 KC OF 20 METERS OPEN FOR DX STATIONS USING SSB. BY-LAWS WERE CHANGED SO THAT CANDIDATES FOR DIRECTORS MUST HOLD GENERAL CLASS OR HIGHER LICENSES.

THE PUBLIC RELATIONS COMMITTEE WAS MADE A STANDING COMMITTEE OF THE BOARD. A QST COVER PLAQUE WILL BE AWARDED THE AUTHOR OF THE BEST QST ARTICLE EACH MONTH. DIRECTOR DENNISTON WAS ELECTED, AND DIRECTORS MEYERS AND KAHN REELECTED TO ONE YEAR TERMS ON THE EXECUTIVE COMMITTEE. THE GENERAL MANAGER WAS ASKED TO STUDY THE POSSIBILITY OF SECURING ISSUANCE OF A U.S. POSTAGE STAMP COMMEMORATING THE 50TH ANNIVERSARY OF THE LEAGUE IN 1964. THE MEMBERSHIP AND PUBLICATION COMMITTEE WILL STUDY PUBLICATION OF A TEN YEAR INDEX OF QST AND A NEW VHF HANDBOOK. HIGHLIGHTS OF THE MEETING WILL APPEAR IN JUNE QST AND THE FULL MINUTES IN THE JULY ISSUE. AR

(Editors note) Perhaps, I, as a non-ham, should keep my mouth shut, but I feel that the League should request that the FCC not change the expiration dates on the licenses each time they are renewed.

FOR EXAMPLE: Frankie's original license expired July 24, 1956. When he renewed it the expiration date was changed to July 5, 1961. He has already applied for his renewal. What the expiration date on this one will be we do not know.

This I do know; Frankie lost 19 days, out of his five years. I also know that you cannot go to the FCC on the date of expiration and have it renewed, so that you can receive the same expiration date. Therefore I feel that the FCC, while they have to look up your original license, should also give you the same date that appears on your original license.

(Cont'd next page)

(Editor's note cont'd)

Why should you, who apply for renewal at least 60 days before expiration, be penalized 19 to 30 days short of five years? If you were arrested and convicted of a crime, committing you to jail for five years, with no recommendation for parole, you would have to serve the full five years. So, why should you lose that time for adhering to the FCC rules for renewal? Maybe I'm right, and maybe I'm wrong, but as I see it, your expiration date should always be the same. Perhaps letters to the League, or the FCC, will bring about a correction in this matter.

"CHEESE BITS", PUBLISHED MONTHLY BY THE MT AIRY V.H.F. RADIO CLUB, INC., PHILA. \$1.00 a year \$1.10 a copy

this issue, please make sure that you attend the June meeting and pick up your copy.

EDITOR: HELEN BRICK, XYL, W3SAD 829 W. Fishers Avenue, Phila., 41, Pa. 215 DA. 4-7524

QSO PARTY, JUNE 10, 11.

CHAIRMAN: K3IUV, Bert Soltoff

PRESIDENT: W3HKZ, Ed Kushner VICE-PRES. K3HWZ; Bill McCutcheon REC. SEC.: W3ZRR; Ray Whitehead COR. SEC.: W3SAD; Francis Brick TREASURER: W3MVF; David Bloch

The June QSO Party will be held on the hill at the rear of the QTH of W3CKP, Warren.

CLUB CALL: W3COX TRUSTEE: W3FDZ, Charles Koesch 2600 Horsham Road, Hatboro, Pa.

Directions to the site are as follows: Route 611 to Doylestown, through Doylestown to the Crosskeys diner. If you are coming from the north, turn right; if you are coming from the South, turn left. Continue over Ferry Road until just before the Unity-Frankford Store, turn left. (If you turn right you'll land in a field) Continue along this road until you see the Doylestown Nursery sign. Turn right, and continue up the hill.

DIRECTORS: W3CKP, Warren Parker W3JSD, John Houser W3KKN, Ernest Kenas W3CL, Harry Stein K3CIV, Ralph Hersh, ex-officio.

The call used at this site will be the club call; W3CCX.

COUNCIL REPRESENTATIVES: W3AYG, John Harris K3LBT, Alfred Oberland

The reason that the club is putting stress on the QSO party is that we are strictly a V.H.F. club, and as such, we feel that we will have a better chance. Now, if you feel that we also stand a good chance in the Field Day competition, express your opinions at the meetings.

MEETING PLACE: West Oak Lane Jewish Community Center; Sedgwick & Thouron Sts. Mt. Airy, Phila., Pa.

OFFICIAL BULLETIN NR 800 FROM ARRL HDQ. WEST HARTFORD, CONN. MAY 19, 1961

DIRECTORS MEETING: Second Wednesday each month.

GENERAL MEETINGS: Third Wednesday each month.

NETS: 144.2, Each Monday, 2000 50.2, Each Monday, 2100 221.4, Each Monday, 2200

TO ALL RADIO AMATEURS BT

For all DX workers and amateurs interested in the ARRL Countries List, the following information with effective date of change in that list is now announced. Malpelo Island: Confirmations for contacts with Malpelo Island stations must be dated November 15, 1945 or later. The prefix HKØ has been used for operation from Malpelo. DXCC credit claims for this addition received before August 1, 1961 will be returned without credit. For a more detailed announcement of the above see DXCC notes June 1961 QST.

(Editors note) Perhaps you noticed in the above rundown, that there is a number preceding my phone number. As of May 21, all of the Phila. area now can dial direct distance. The 215 area covers most of our members; including K3GAY, Don, in Allentown. But those of you in the 215 area, calling our members in Jersey must dial 609 before dialing the number. For our member in Delaware, you must dial 302 before his number. The code number for Bill, W2SXU, is 201.

AR *****

If number of pages permit, I will include a Dialing Code number sheet. This is through the courtesy of the Bell Telephone Company of Pennsylvania.

Worried about TVI? Peruse the following, and then stop worrying.

We realize that other parts of the country also have direct distance dialing, and that is why we would like to add the code number sheet to this issue.

A report from WCAU is that KFEQ-TV, in St. Joseph, Mo., Channel 2, has been interfering with CBS' Channel 2, in N.Y. since 8:00 A.M., May 23rd. WCAU has two ten element yagis pointed to N.Y., and KFEQ-TV's signal is either coming in off the side, or down from the top. Sometimes it is stronger than the N.Y. signal.

If room does not permit inclusion in

By W3HKZ, Ed

By W3SAO, Frankie

Radio Interference Oddities:-

The field off of the FCC and the local power company were deluged with calls from a section of a certain city, complaining of TVI. An FCC engineer located the place where the TVI was the strongest. With the help of a line-man, power connectors to various buildings were opened one at a time until the TVI stopped. The culprit proved to be an unused neon sign at a gas-line station. Bare output wires from the transformer were touching a brick wall which served as a conductor because it was covered with aluminum paint.

When a satellite tracking station complained of difficulty to radio reception from a space object, the FCC pinned the blame on spurious signals from a station in the Netherlands.

A German station complained of interference. FCC Bearing showed it came from the vicinity of Ceylon, which helped to further determine that it emanated from the nearby Maldine Is.

Interference to transmission from California to Japan was found due to a faulty transmitter of a station in Hawaii.

An AM station sent the FCC a handbill announcing the opening of a "new broadcast station". The latter did not appear on the Commission's records so the FCC visited the scene. They found a 14-year-old boy who had advertised a low-power device to communicate with playmates in the neighborhood during certain hours.

Interference involving CW are not too common. However, one concerned a complaint by an Army camp of undecipherable CW signals on a military frequency. Though keying was poor, FCC monitors were able to fix them as coming from another Army post, presumably from a class studying CW.

Some Interference Complaints Boomerang

Interference to jet planes was traced to a receiver used at the complaining airfield. Somebody had forgotten to replace a protective cover shield.

An Airport interference complaint was determined to be caused by the strips of neon lights which outline its control tower.

PROJECT MERCURY

As Sheppard was coming down they had to switch from HF to UHF in order to have communications.

The known transmitter for locating capsule in water was on 240 Mc. A good frequency area for transmitter hunting.

There were 2 HF and 2 UHF transceivers built by Collins.

Due to the fact that I have not been active on the band lately, my report will be short; W3GXB, Bob, reports a few good DX nites on the band.

However, as alternate net control on the Pack Rate' 2 meter Monday nite net a few comments are in order.

If the net control station is using a single beam he should always favor the station to whom he is transmitting. It is difficult for net control to swing his beam for each station, however he can anticipate the general direction of the next station.

W3SAO is going to return to a stacked 10 over 10 beam for this very reason. A sharp beam has its advantages, but for net control it just does not fill the order.

Thanks to all who call in each Monday Nite.

KNOW YOUR CONSTITUTION

By W3SAO

This month we are asking you to refresh yourself on the following;

DUTIES OF OFFICERS: ART. VII, Sec. 1-6

MEETINGS: ART. VIII, Sec. 1-2

220 MC. NEWS

By W3KKA, Ernie

K3IUU-Bert is busy getting the expedition ready for the QSO Party (June 10-11). He has most everything and the crew is well established. They will be on 50, 144, 220, 432 and 1296 Mc.

Now it is vital that all members work this group on all the bands they can. This club project is a desirable activity. It will be in competition with other clubs throughout the country. Be sure you work them on as many bands as you can. There should be at least 200 contacts available to Bert and his gang from club members alone. They will be operating under the Club Call; W3CCX. Also, gang, be sure and work any of the individual members who might be in this contest seriously, as well as any other groups from our club that might be on. This is your chance to show some of that real Pack Rat spirit.

W3ZTL-Myles is the newest club member on 220. Using a homebrew 6360 rig and converter. He still needs a beam, but gets out locally FB on the 2 M. Beam.

W3FOZ-Charles has the beam and converter but is still building the rig. Charlie's antenna is a neat 5 over 5, although it still needs adjustment.

W3CGV-Gary is experimenting with a nuvistor. Anthing to hear better with!

W3GGR-Lew, lost a 65 ft. tower with a 64 element 432 Beam in a freak wind-storm. What a tough break.

(Cont'd next page)

W2KFC-Lee, has more nicknames hung on him than anybody. Windtunnel Miles, Post Hole Lee, Scroungee, The Pontiac Kid. I like Johnny Reb Miles the best. Lee has put his 432 beam in the attic. Claims short lead-in helps, no weather problems, and can still work them all.

K3BPP, Oscar, pumped his rig into the converter, recently. Seems to me coax relays should be marked xmit, rcvr, ant, because this can happen to anybody when the OHM-Meter isn't handy.

K2SMZ-John, has been on the sick list recently, W2AXU must have passed the bug down to him.

W2EIF, Joe, has a new Oldsmobile. What these OD's won't do to track down bootleggers. He got it to go after the bootlegger he heard in North Jersey.

W3UJG-Ernie is rumored to now be on Sideband.

W2AXU-Jack, ran the Monday Nite net recently. How's it feel, Jack, to have everybody point their beam at you?

W3CL-Harry, is on tour again. Remember the weight boy, Pack Rats should all have a svelte look.

W2BAY-Well look who got on the band! The Adtiner himself, Ed is sporting one of the new Gonset Comm IV's for 220. Uses an 11 element Cush Craft yagi, Receiving with a Notional Conv. into an MC 303. He's the 1st SJRA member, we know of, on 220 and certainly the 1st to call into our net.

I would like to thank the members for the flowers, cards and calls regarding the death of my father. It's nice to have so many friends during this sad time.

73,
Ernie, W3KKN

We would like to offer our congratulations to the new officers of the Bucks County Amateur Radio Club. K3JDK Fenton Glazier, President K3GSV, Heddy Grant, Vice President W3PRX, Joe Monahan, Reg. Sec. K3BKP, Irene Coffin, Cor. Sec. K3EGP, Ralph Blakemore, Treasurer.

(Aside) Now I know how Ralph is buying his new home. Hi-hi.

COMING EVENTS

- JUNE 4 - BUCKS COUNTY PICNIC, BOWMAN'S HILL, WASHINGTON'S CROSSING PARK, PA.
- JUNE 10-11 - V.H.F. QSO PARTY
- JUNE 18 - E. PA. SECTION PICNIC, HERSHEY, PA.
- JUNE 24-25 - FIELD DAY
- JULY 16 - CUMBERLAND VALLEY ARC PICNIC MEMORIAL PLAYGROUND, SCOTLAND PA.

AUGUST 13 - PACK RATS PICNIC, FORT WASHINGTON STATE PARK, FLOURTOWN, PA.

KNUCKELHEADS PICNIC

EAST COAST VHF SOCIETY PICNIC, SADDLE BROOK, NEW JERSEY.

COMMENTS ON SIX AND TWO,

By SMEL A. RHAT

The DX season is now with us as can be attested to by the many 1,2,4,5,8,9 and A calls which have been logged lately. A few 6's and 7's have also been heard but no contacts reported. The two meter band has also picked up in activity with the band reported open to Ohio, West Va. and up into Mass. The 220 Mc band has also showed some promise, with signals from the New York area being heard occasionally.

Keep in mind that the big DX season on six is usually between the dates of May 15 and July 15, and that good "ground wave" contacts on 144 had 220 Mc. can usually be made thru June, after that, one usually has to wait until Sept. and Oct. for resumption of "ground wave".

By the time you read this, you will also have studied a slate of candidates who aspire to be officers of your club during the coming year. The list of candidates was prepared thru the combined efforts of the Nominating Committee and nominations from the floor at the nominating meeting. Many considerations have to be taken into account when a club member is studied as prospective officer material. One of the first to be taken up is whether the person is willing to serve or not. The next is whether his other than club activities will prevent his serving. Surprisingly enough there are many talented people in the Mt. Airy VHF Club who are unable to be candidates because of other commitments. Be that as it may, the slate presented to you represents a select group from which you can make your final choice of club leaders with utmost confidence, and the assurance that the Club will be kept moving and active.

SMEL

A FIRST!

Well, what do you know? Those Coal Cracker Brass Pounders finally caught a Rat, ex-Rat, I should say, for their Cat Ranch. W3MWP, Leo.

Atta boy, Leo, stay in there and keep us informed of the diabolical plans they have for us.

Ranch must be doing pretty good. W3CUK the manager made enough to go to Bermuda.

AUGUST 20 - BRASS POUNDERS PICNIC (I GOOFED in "COMING EVENTS.")

SWAP SHOPPE
 Conducted by, W3ZRR, Ray Whitehead,
 FOR SALE (To the first person with
 \$30.00)

1 Power supply, 400 V at
 400 mills, 250 V at 100 mills
 DC and 12.6 V at 10 Amps AC.

(For the first good offer)
 1 converter, 15 meters.
 Built in power supply, out-
 put to 80 meters.

CONTACT K38PK, David Gindin
 6504 Roosevelt Blvd,
 Phila., 49, Pa.

FOR SALE 1 used Gonset 2B for 144 Mc.,
 6 V. Excellent condition.
 \$140.00

CONTACT K31PM, Stan Smith
 2535 Bleigh Street,
 Phila., 15, Pa.

FOR SALE Measurements Corporation
 Vacuum Tube Voltmeter
 Model 62
 DC and AC to 1000 Megacycles
 Ranges 1,3,10,30, 100 Volts.
 Price \$25.00

CONTACT K3IUV, Bert Saltoff
 8582 Benton Avenue,
 Phila., 15, Pa.

WANTED Coils for HRO-5

CONTACT K3KMN, George Gakoumis
 116 Mark Drive,
 Morrisville, Pa.

Please send all articles for "Swap and
 Shoppe" to W3ZRR, Ray Whitehead,
 4534 N. Smedley Street,
 Phila., 40, Pa.
 DA. 4-5910

HIGHLIGHTS OF MAY MEETING

The amendment to the Constitution and
 By-Laws, that you received in the last
 issue, was voted upon and passed, with
 two dissenting votes.

Mark it: ADOPTED MAY 27, 1961, and
 attach it to your copy of the Consti-
 tution and By-Laws.

The slate of officers for 1961-62 was
 presented by the nominating committee,
 with other names nominated from the
 floor.

The complete slate
 The complete, for your study and consid-
 eration appears on the next page.
 Study it carefully and be prepared to
 vote at the June meeting.

Following the nominations, Lee, W2KFC
 showed films of some of our past Field
 Day expeditions and one of our picnics.

All-in-all, we had quite an exciting
 meeting.

YOO-HOO, remember our picnic and family
 day. It's only two months away, Aug.
 13th. Registration fee; \$1.00 per
 family, note family, not per head.

We were afraid that this column was
 to be put-up for rent, but thanks to
 the ARRL and QST arriving today we do
 have some news.

It is now official, WE ARE THE NUMBER
 ONE V.H.F. CLUB IN THE COUNTRY.

From page 64, June QST:

Mt. Airy V.H.F. Club (Pa.)	617,139
South Jersey Radio Asso:	493,420
6 Meter Club of Chicago	271,567
National Capital VHF Society	156,743

(Quoting from page 63, June QST)

The V.H.F. Sweepstakes looks more like
 its lower-frequency counterpart every
 year. Always the top event on the v.h.
 f. man's calendar, The V.H.F. SS now
 threatens to displace one of the Big
 Three (Field, SS, DX Contest) as an
 all-time favorite operating activity.
 (One goof; left out Bay after Field)
 the 14th running, January 7-8, 1961,
 brought in 1561 valid logs, up 8 per
 cent over the 1960 record. Some 1094
 stations were on 50 Mc., and 900 on
 144; both records. All this came about
 with conditions generally poor. We
 shudder to think what might have hap-
 pened had there been major propagation
 breaks around the country!

For the first time in v.h.f. history,
 single-operator contact totals went
 over the 500 mark. W3HYJ and W3KKN,
 both of the Philadelphia area, worked
 521 and 541 stations respectively.
 W3HYJ had 19 ARRL Sections, for 30,
 218 points, and W3KKN, 15, for 27,025.
 Eight stations exceeded the magic fig-
 ure of 400, once considered all but
 impossible of achievement in a v.h.f.
 contest. These included W9RDS, Roselle,
 Ill., with 415, showing that there was
 no East Coast monopoly in this field.

Club spirit makes the V.H.F. Sweep-
 stakes the grand party it is, and sev-
 eral years of intensive effort paid
 off in 1961. The Mt. Airy V.H.F. Club,
 never less than 5th since their entry
 into the fray in 1957, climbed to 3rd,
 then 2nd, and finally this year pushed
 the perennial winner, South Jersey
 Radio Association, out of the top spot.
 With practically every member taking
 part, 92 Pack Rates brought home a to-
 tal of 617, 139 points. Note well
 that this is an average score per mem-
 ber of 6708 points, an achievement not
 even approached by any competitor.

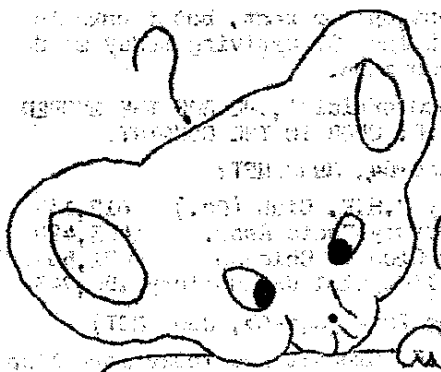
SJRA virtually equalled their 1960
 score, but lost to their across-the-
 river rivals by a wide margin.

LATE SWAP AND SHOPPE

FOR SALE RME-4350A, Ham band receiver
 Excellent condition, aligned
 and calibrated.

CONTACT K3QTT, George Ryan
 215-DE. 8-2300 (days)
 609-ND. 5-0358 (evenings)

 YOO-HOO, our picnic will be held at
 Fort Washington State Park, Flourtown,
 Pa. Will you be there?



? Oh me, oh my!
 Who shall I vote for?
 (Election; June 21)

SLATE

- PRESIDENT:** K3HWZ, WILLIAM McDUTCHEON
 W2AXU, JACK POWER
- VICE-PRESIDENT:** K3ILV, BERT SOLTOFF
 W3NSI, LYN ROWLAND, JR.
- CON. SECRETARY:** W2EIF, JOE KILGORE
 K3HJA, EARL WENK, JR.
- REC. SECRETARY:** W3ZRR, RAY WHITEHEAD
 K3JJZ, EL WEISSMAN
 K3MSV, JULE BERNOFF
- TREASURER:** W3MVF, DAVE BLOCH
 W3HAB, MONROE POWELL
- DIRECTORS: (VOTE FOR TWO)**
- W3HKZ, ED KUSHNER
 - K3HSS, CHARLES LUSTICK
 - K3PTL, COURT MANNING, JR.
 - W3DZP, BILL MILLER
 - W3SAD, FRANKIE BRICK
 - W3AJF, HORACE DEACON, JR.
 - K3EPB, HOWARD FRETZ
 - K3KMM, GEORGE GAKOUMIS

OK, boys, there is your slate, study it, and come prepared to vote at the June 21st meeting.

I don't envy you trying to pick two directors out of eight.

The YORK ROAD RADIO CLUB is holding an OLD TIMERS NITE on Tuesday, June 6, at their meeting place, Cheltenham Township Building, Azalea Room, at 8:30 P.M., York Road above Church Road, Elkins Park Pa.

Unfortunately, Frankie, as an ex-president, will be unable to attend due to attending a meeting of the Deacons of our Church.

YNA, you didn't know Frankie was a Deacon, did-ja!

ANOTHER PICNIC

THE NATIONAL CAPITOL V.H.F. SOCIETY is holding one on JUNE 4th, at MARSHALL HALL AMUSEMENT PARK, on the Maryland shores of the Potomac, 20 miles south of Washington, D.C. Registration; \$1.00.

Ship space for news!

METERING FOR GRID DIP METERS

By W2AXU, John B. Power

The manufactured grid dip meter and the home-constructed unit usually employ a 1 milliamperemeter. If a microammeter were substituted with its appropriate circuit, the grid dip meter becomes more sensitive and therefore more useful. The circuit I am about to describe can be incorporated into any existing grid dip meter or any future construction of a grid dip meter.

Figure 1 shows the circuit diagram. Basically it is an unbalanced bridge with a negative voltage applied to one side and a positive voltage applied to the other side.

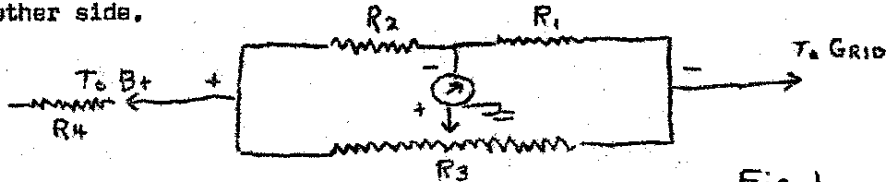


Fig. 1

The potentiometer serves to balance or unbalance the bridge.

The common meter connection in grid dip meters is shown in Figure 2 and indicates grid current directly.

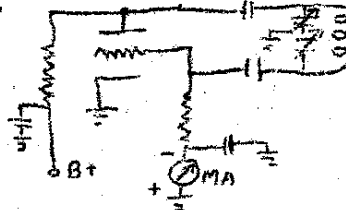


Fig. 2

A 1 milliamperemeter must be used because the normal flow of grid current is between .4 and .5 milliamperes. Even with the plate voltage turned off but the filament on, the current produced by the electron flow from the heated cathode to the grid is in the vicinity of about .15 milliamperes. From this you can see that a microammeter with a full scale reading of 100 or 200 microamperes could not be used.

Returning to Figure 1 we can now see how we can use a microammeter in our grid dip meter without having the needle off scale.

As stated above, a negative voltage is applied to one side of the bridge. This negative voltage is produced by the grid current flow. The positive voltage applied to the other side of the bridge is secured from the power supply and is limited by resistor R4. Now if the arm of R3 is moved to the positive end of the network, we are shorting out the positive voltage to ground through R4 and the meter will be deflected off full scale in a positive direction by the action of the negative voltage. If R3 is moved to the negative end of the network, shorting the negative voltage to ground, the meter will be deflected off scale in a negative direction. By moving the arm of R3 to some position between these extremes, the meter can be brought to zero. For our use, however, the meter needle can be brought to about midscale or a little more and kept there, by slight adjustments of R3 to compensate for the variations in grid current while the grid dip meter is in use.

Figure 3 shows how this circuit can be applied in practice and gives the resistor values. The positive voltage limiting resistor R4 may have to be adjusted slightly. Two values are given, one for 150 volt power supply, the other for a 100 volt power supply. The meter can be any low range microammeter.

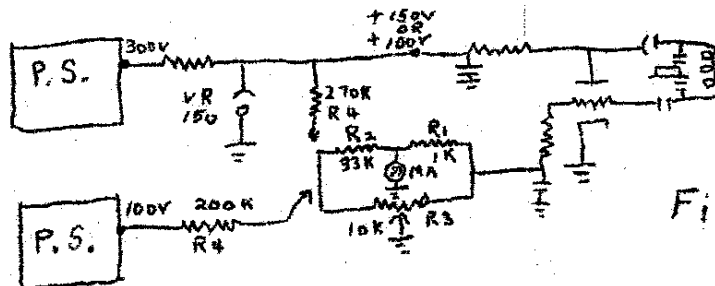


Fig. 3

MEETING NOTICES

JUNE 14, 1961

BOARD OF DIRECTORS MEETING

The Board of Directors' Meeting will be held at the QTH of W3HKZ, Ed Kushner, 148 Stoneway Lane, Sala-Cynwyd, Pa., on Wednesday evening June 14, at 8:00 P.M. If for any reason you are unable to attend please call RD. 4-4353.

JUNE 21, 1961

GENERAL MEETING

The regular monthly meeting will be held at the West Oak Lane Jewish Community Center, Sedgwick and Thouron Streets, Mt. Airy, Phila., Pa., on Wednesday, June 21, at 8:00 P.M.

The main event of the evening will be the election of officers for 1961-62.

Through the courtesy of W3JSD, John Houser, we have as our speaker, W2LOY, ED CLEGG, of Clegg Laboratories. Ed will have with him samples of their latest equipment, including the Zeus, and will explain their functions.

All members are urged to attend this important meeting.

Dialing Within the 215 Area

On calls within the 215 area, which includes all Philadelphia central offices and the central offices listed below, dial 2 letters and 5 figures (or 7 figures) of the telephone number. Philadelphia central offices are listed on page 8 of your Directory.

CENTRAL OFFICE	PLACE
ADAMS 3.....	Flourtown
ALPINE 7.....	Parkside
ANDREW 7.....	Denver
ANDREWS 9.....	Downingtown
ATLAS 7.....	Schwenksville
ATWATER 5.....	New Smithville
ATWATER 6.....	Morgantown
AXMINSTER 4.....	Uhlerstown
AXTEL 7.....	Carversville
BELMONT 4.....	Green Lane
BLACKBURN 2,3,8...	Easton
BRIDGE 3.....	Honey Brook
BROADWAY 2,5,7,9.	Norristown
CHERRY 9.....	Dublin
CLEARBROOK 9.....	Drexel Hill
CLIFFORD 6.....	Harleysville
CLINTON 5.....	Kemblesville
COLONIAL 2.....	Northampton
COLONY 8.....	Avondale
CONGRESS 4.....	Catasauqua
CRESTWOOD 4.....	Landenberg
CYPRESS 5.....	Morrisville
CYPRESS 8.....	New Tripoli
DIAMOND 3.....	Warrington
DRAKE 7.....	Lehighton
DUDLEY 3, 4.....	Coatesville
DUNKIRK 5.....	Douglasville
ELGIN 6.....	Newtown Square
ELMWOOD 5,7.....	Feasterville
ESSEX 9.....	Cheltenham
EXPORT 9.....	Westtown
EXPRESS 5.....	Allentown
FACULTY 3, 6.....	Pottstown
FELDBROOK 6.....	Springtown
FILMORE 8.....	Doylestown
FIRESIDE 7.....	Unionville
FLANDERS 2, 4.....	Upper Darby
FOREST 7,9.....	Boyerstown
FOXCROFT 3.....	Exton
FRANKLIN 2,3,4,5,6..	Reading
GILBERT 4.....	Kennett Square
GLENDALE 2.....	Valley Forge

CENTRAL OFFICE	PLACE
GLENVIEW 8.....	Eagle
GLOBE 9.....	Chester Heights
GYPSY 4.....	Chester
GYPSY 8.....	Belvidere
HENLOCK 2,3,4,5,7.	Allentown
HILLCREST 5.....	Terre Hill
HILLTOP 6, 7, 9....	Havertown
HOMESTEAD 9.....	Pughtown
HUBBARD 5.....	Marcus Hook
HUNTLEY 6.....	Mortonville
HUXLEY 4.....	Adamstown
HUXLEY 9.....	Collegeville
HYACINTH 5.....	Linfield
HYATT 3.....	Yardley
JORDAN 2.....	Hamburg
JUNIPER 2.....	Birdsboro
JUNO 4.....	Center Point
KEYSTONE 6.....	Quakertown
KINGSWOOD 3, 4...	Swarthmore
LAWRENCE 5.....	Bryn Mawr
LEHIGH 2, 4.....	Ridley Park
LOWELL 6.....	Media
LUDLOW 3, 6.....	Sharon Hill
LUTHER 9.....	Womelsdorf
LYNWOOD 8.....	Wycombe
LYRIC 3.....	Atglen
MADISON 2, 3, 6...	Lansdowne
MAIN 8.....	Mendenhall
MELROSE 5.....	Elkins Park
MERCURY 9.....	Cornwells
MIDWAY 2, 9.....	Ardmore
MITCHELL 6.....	Ambler
MOHAWK 4, 7.....	Bala-Cynwyd
MURDOCK 9.....	Yellow House
MURRAY 8.....	Wayne
NIAGARA 4.....	Paoli
OLDFIELD 9.....	Willow Grove
ORCHARD 8.....	Sinking Spring
ORLEANS 9.....	Pennsburg
OSBORNE 2, 5.....	Matboro
OVERBROOK 2.....	Topton
OVERBROOK 3.....	Kutztown
OWEN 2, 6.....	West Chester

CENTRAL OFFICE	PLACE
OXBOW 9.....	North Wales
PARKWAY 3.....	Souderton
PLAZA 9.....	Nazareth
PLEASANT 4.....	Sassamansville
PLEASANT 6.....	Kempton
PORTER 7.....	Slatington
PYRAMID 4.....	Buckingham
RIVERSIDE 9.....	Riegelsville
ROGER 6.....	Plumsteadville
SKYLINE 7.....	Langhorne
SPRUCE 7.....	Reading
STILLWELL 8.....	Bristol
SUNSET 9.....	Drexel Hill
SWIFT 7.....	Allentown
SWINBURNE 3.....	Lenape
TALMADGE 7.....	Chester Springs
TAYLOR 5, 8.....	Conshohocken
TEMPLE 7.....	Bath
TERRACE 8.....	Hellertown
TILDEN 5.....	Bally
TREMONT 2, 4, 6...	Chester
TURNER 4, 6, 7....	Jenkintown
ULSTER 7.....	Parkesburg
ULYSSES 5.....	Lansdale
UNDERHILL 9.....	West Grove
UNIVERSITY 3.....	Pen Argyl
UNIVERSITY 5,6,7,8..	Bethlehem
VANDYKE 2.....	Line Lexington
VERNON 6.....	Flourtown
VOLUNTEER 2.....	New Hope
WALKER 6.....	Leesport
WALKER 9.....	Laureldale
WELLINGTON 3.....	Phoenixville
WHITEHALL 4.....	Fleetwood
WHITNEY 2.....	Glenmoore
WILLIAMS 8.....	Royersford
WILSON 7.....	Huntingdon Valley
WINDSOR 5, 6, 9...	Levittown
WOODRIF 5, 7....	Emmas
WORTH 8.....	Newtown
YUKON 2.....	Upper Black Eddy
795.....	Bedminster



Important!

Beginning May 21, 1961, all calls to Delaware and New Jersey will be outside the 215 Area and you must first dial the Area Code before dialing the telephone number. These places and their Area Codes are included in the list on page 3.

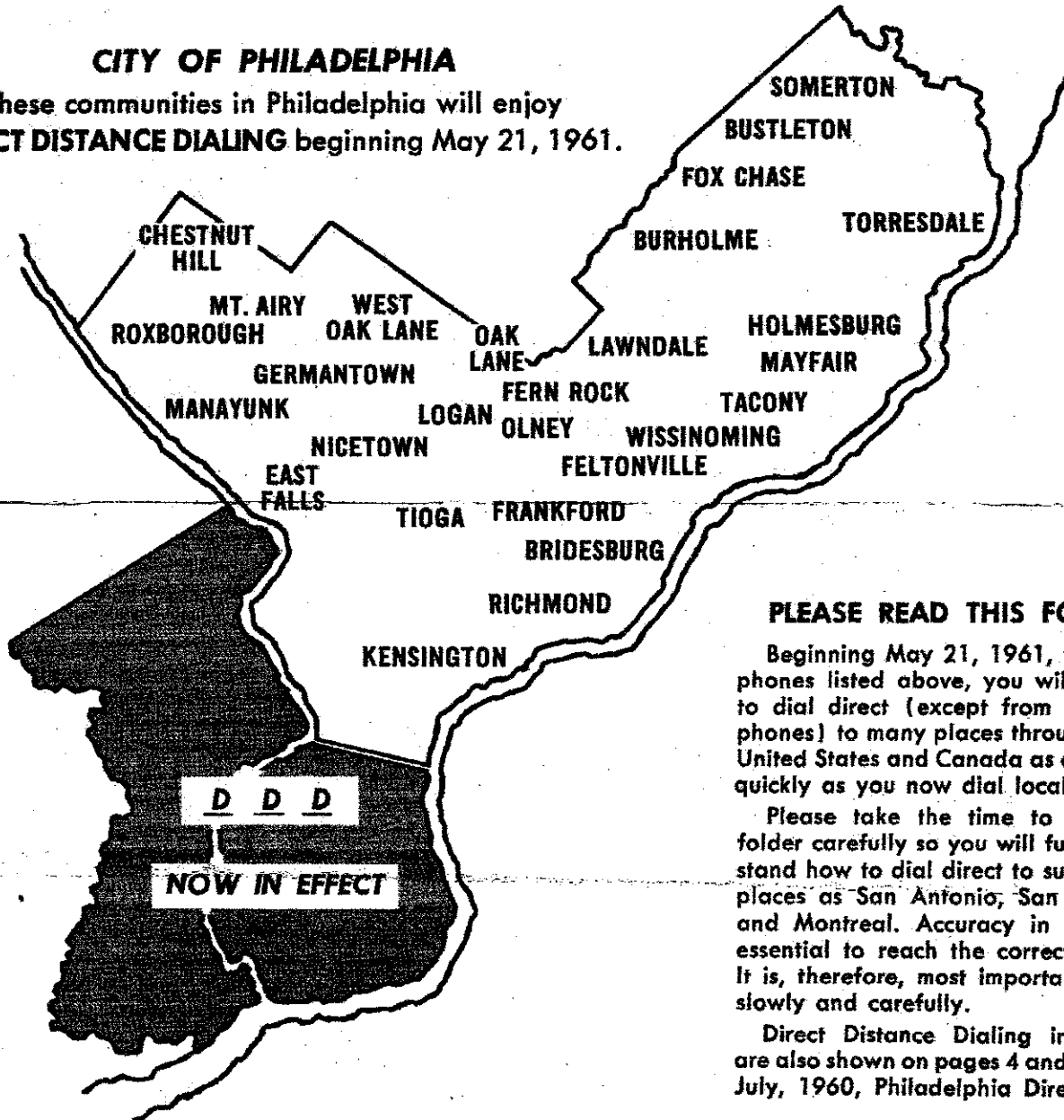
NATIONWIDE DIRECT DISTANCE DIALING

WILL BEGIN **MAY 21, 1961** AT 7:00 A.M.

From **HOBART NEPTUNE PILGRIM 2** *Telephones*
IVYRIDGE ORCHARD RANDOLPH

CITY OF PHILADELPHIA

These communities in Philadelphia will enjoy
DIRECT DISTANCE DIALING beginning May 21, 1961.



PLEASE READ THIS FOLDER

Beginning May 21, 1961, from telephones listed above, you will be able to dial direct (except from coin telephones) to many places throughout the United States and Canada as easily and quickly as you now dial local calls.

Please take the time to read this folder carefully so you will fully understand how to dial direct to such distant places as San Antonio, San Francisco and Montreal. Accuracy in dialing is essential to reach the correct number. It is, therefore, most important to dial slowly and carefully.

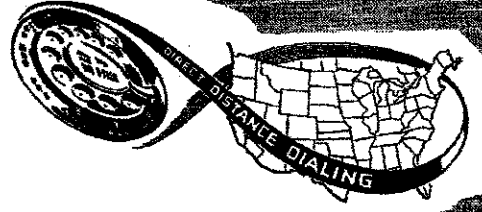
Direct Distance Dialing instructions are also shown on pages 4 and 5 of your July, 1960, Philadelphia Directory.

THE BELL TELEPHONE COMPANY OF PENNSYLVANIA



Your neighbors enlarging your world through service and science.

DIRECT DISTANCE DIALING



Beginning May 21, 1961, at 7:00 A.M.

From **HOBART** **NEPTUNE** **PILGRIM 2** *Telephones*
IVYRIDGE **ORCHARD** **RANDOLPH**

For Station-to-Station Calls Only (Not from Coin Telephones)

To speed your out-of-town calls you may dial direct to many distant points. To make this possible the United States and Canada have been divided into approximately 100 dialing areas. Each area is identified by a 3-figure code which directs your call to the area you want. To complete a call, dial the 3-figure area code, followed by the telephone number.

The code for the Southeastern Pennsylvania area shown on the map below is 215. Calls **WITHIN** the 215 Area **DO NOT** require the dialing of an Area Code. Calls to points **OUTSIDE** the 215 Area **DO** require the dialing of an Area Code. Here are the easy steps to follow for dialing direct:

1 CHECK *the* PLACE YOU WANT

A partial list of places you can dial direct and their Area Codes, if needed, is on pages 3 and 4.

If you know the number and the place you want is not listed, dial "Operator" and ask her for the Area Code.

2 OBTAIN *the* NUMBER

There is a new look in telephone numbers. The number you are calling may be listed in any of the following ways:

HOPKINS 6-5120 **LL6-9970** **466-5312**

If you don't know the out-of-town telephone number you want, dial "Operator" and ask for the Area Code and Information in the place you are calling.

When you obtain the number, jot it down in your personal list of telephone numbers, along with the Area Code.

3 THEN DIAL *the* CALL

On Calls Within the 215 Area

When the number consists of 2 letters and 5 figures, dial as shown in the following example: **HO 6-5120**

When the number consists of 7 figures, dial as shown in the following example: **466-5312**

See page 4 for list of dialable points.

On Calls Outside the 215 Area

Dial the Area Code and the telephone number.

Example—**904 PL5-9970**

NOTE

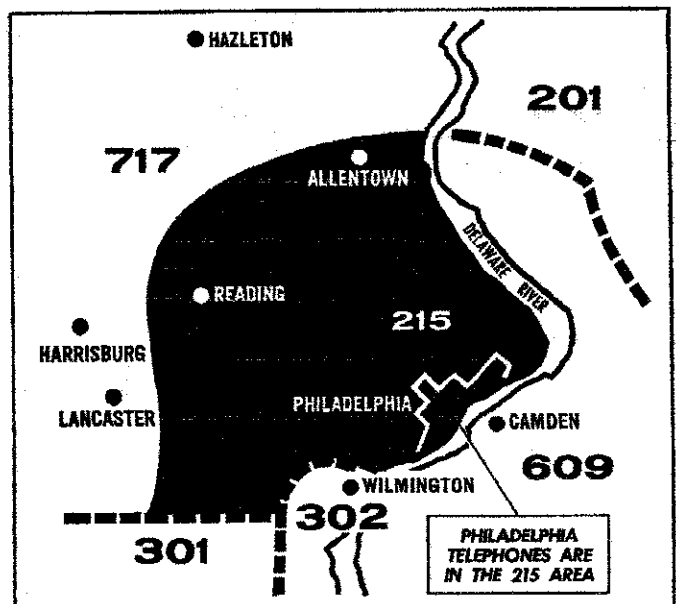
Beginning May 21, 1961, all calls to Delaware and New Jersey will be outside the 215 Area and you must first dial the Area Code before dialing the telephone number. See page 3 for the Area Codes for these places.



IMPORTANT! TO AVOID BEING CHARGED IF YOU REACH A WRONG NUMBER . . .

If you should happen to reach a wrong number, make sure you report it to the operator immediately so you will not be charged for the call. Here's what you should do:

- ask the party who answers what city or town you reached.
- hang up then dial "OPERATOR" right away.
- tell the Operator you reached a wrong number.
- give her the name of the city or town you reached.



Some Places You Can Dial Outside the 215 Area

You can dial telephones in hundreds of other places

If the place you want is not listed, ask "Operator" for the Area Code.

On calls outside the 215 Area dial the Area Code and the telephone number.

PLACE	AREA CODE	PLACE	AREA CODE	PLACE	AREA CODE	PLACE	AREA CODE
ALABAMA		IOWA		NEW JERSEY		Erie	814
Birmingham	205	Ames	515	Asbury Park	201	Greensburg	412
Decatur	205	Cedar Rapids	319	Atlantic City	609	Harrisburg	717
ARIZONA		Des Moines	515	Burlington	609	Hazleton	717
Flagstaff	602	Davenport	319	Camden	609	Indiana	412
Phoenix	602	KANSAS		Collingswood	609	Lancaster	717
Tucson	602	Grant Bend	316	Elizabeth	201	Lebanon	717
ARKANSAS		Leavenworth	913	Gloucester	609	Pittsburgh	412
Hot Springs	501	Topeka	913	Haddonfield	609	Pottsville	717
Little Rock	501	Wichita	316	Haddon Heights	609	Scranton	717
CALIFORNIA		KENTUCKY		Jersey City	201	Uniontown	412
Bakersfield	805	Louisville	502	Laurel Springs	609	Warren	814
Fort Bragg	707	Winchester	606	Marlton	609	Washington	412
Fresno	209	LOUISIANA		Merchantville	609	Wilkes-Barre	717
Los Angeles	213	Lake Charles	318	Moorestown	609	RHODE ISLAND	
Monterey	408	New Orleans	504	Newark	201	Narragansett	401
Sacramento	916	MAINE		New Brunswick	201	Providence	401
San Diego	714	Portland	207	Paterson	201	SOUTH CAROLINA	
San Francisco	415	MARYLAND		Princeton	609	Columbia	803
COLORADO		Annapolis	301	Runnemede	609	Spartanburg	803
Colorado Springs	303	Baltimore	301	Trenton	609	SOUTH DAKOTA	
Denver	303	Cumberland	301	Woodbury	609	Madison	605
CONNECTICUT		Elkton	301	NEW MEXICO		Sioux Falls	605
All points	203	Hagerstown	301	Albuquerque	505	TENNESSEE	
DELAWARE		Salisbury	301	Las Vegas	505	Chattanooga	615
Delaware City	302	MASSACHUSETTS		Santa Fe	505	Memphis	901
Dover	302	Boston	617	NEW YORK		Nashville	615
Hockessin	302	Falmouth	617	Albany	518	TEXAS	
Holly Oak	302	Framingham	617	Binghamton	607	Abilene	915
Middletown	302	Springfield	413	Champlain	518	Amarillo	806
Newark	302	Worcester	617	Elmira	607	Austin	512
New Castle	302	MICHIGAN		Hempstead	518	Dallas	214
Newport	302	Battle Creek	616	Mt. Vernon	914	Galveston	713
Seaford	302	Detroit	313	New York	212	Fort Worth	817
Wilmington	302	Flint	313	Niagara Falls	716	Houston	713
DISTRICT OF COLUMBIA		Grand Rapids	616	Nyack	914	San Antonio	512
Washington	202	Lansing	517	Riverhead	518	UTAH	
FLORIDA		MINNESOTA		Rochester	716	Ogden	801
Fort Lauderdale	305	Duluth	218	Schenectady	518	Salt Lake City	801
Fort Myers	813	Minneapolis	612	Syracuse	315	VIRGINIA	
Jacksonville	305	Rochester	507	Troy	518	Norfolk	703
Key West	305	St. Paul	612	Utica	315	Richmond	703
Miami	305	MISSISSIPPI		White Plains	914	Roanoke	703
Winter Haven	813	Biloxi	601	NORTH CAROLINA		Staunton	703
GEORGIA		Gulfport	601	Charlotte	704	WASHINGTON	
Atlanta	404	MISSOURI		Greenville	919	Seattle	206
Brunswick	912	Kansas City	816	Rocky Mount	919	Walla Walla	509
IDAHO		St. Louis	314	NORTH DAKOTA		WEST VIRGINIA	
Idaho Falls	208	Springfield	417	Fargo	701	Wheeling	304
Twin Falls	208	NEBRASKA		OHIO		WISCONSIN	
ILLINOIS		Grand Island	308	Akron	216	Eau Claire	715
Belleville	618	Lincoln	402	Canton	216	Madison	608
Champaign	217	Omaha	402	Cincinnati	518	Milwaukee	414
Chicago	312	NEVADA		Cleveland	216	CANADA	
La Salle	815	Elko	702	Columbus	614	Calgary	408
Peoria	309	Reno	702	Dayton	513	Halifax	902
INDIANA		NEW HAMPSHIRE		Marietta	614	Montreal	514
Elkhart	219	Concord	603	Steubenville	614	North Bay	705
Gary	219	Laconia	603	Youngstown	216	Ottawa	613
Indianapolis	317	Manchester	603	Zanesville	614	Quebec	418
South Bend	219	Portsmouth	603	OKLAHOMA		Regina	306
Vincennes	812	NEW JERSEY		Oklahoma City	405	Toronto	416
NEW HAMPSHIRE		Amesbury Park	201	Tulsa	918	Trois Rivières	819
Concord	603	Atlantic City	609	OREGON		Vancouver	604
Laconia	603	Burlington	609	Klamath Falls	503	Windsor	519
Manchester	603	Camden	609	Portland	503	Winnipeg	204
Portsmouth	603	Collingswood	609	Salem	503		
		Elizabeth	201				
		Gloucester	609				
		Haddonfield	609				
		Haddon Heights	609				
		Jersey City	201				
		Laurel Springs	609				
		Marlton	609				
		Merchantville	609				
		Moorestown	609				
		Newark	201				
		New Brunswick	201				
		Paterson	201				
		Princeton	609				
		Runnemede	609				
		Trenton	609				
		Woodbury	609				

NOTE: The second figure of the Area Code is always the figure "0" (zero) or the figure "1". Be careful not to confuse these figures with the letters "O" or "I" when dialing.