THE DELAWARE-LEHIGH AMATEUR RADIO CLUB, INC.

NEWS

RD #4
GREYSTONE BUILDING
NAZARETH, PA
18064

Christmas City Station a Success

The DLARC thanks the following people for making the Christmas City Special Event Station a success. Roy KA3MNY, Tom N3EBH, Bud WA3BOM, Ken WB3IFV, Diane NB3L, Harry WB3HBR, Bob N3DMI, Ken KA3EED, Al KA3ODI, Wayne KY3N, Tim KC3QO, Bill KA3OEG, Don N3FEA, Bob KU3K, Mark N3EOF, Mike WB3CTR, Blari K3YD, and anyone else who joined the fun. It was a real joy to see a turn out like this for the Club event. We made over 200 contacts and most importantly WE HAD A BALL. There is somthing special about operating the station during this event. The holiday greetings and best wishes flying back and forth, and cookies and coffee and doughnuts and pleasant conversation and... well I guess you had to be there to appreciate the fellowship. By the way, Who wants to be chairman of the Christmas City Committee for 1987?
de Ken KA3EED

A JOB WELL DONE

I would like to thank all the VE's for their time and effort in helping me make the past two years of exams a success. I would especially like to thank Don, KC3II and BOB, W2CCE for taking over as liasons for the exams. The past two years have been very enjoyable, and I will continue to help at the test sessions as much as possible, but other obligations prevent me from being as active as before. I ask all club members to give Don And Bob their support in this vital program, and hope to see some of the less active VEs helping at the exams. Again I thank everyone for thier past help and encouragememt.
de Dennis KR3U

QUESTION POOL RULES EFFECTIVE DECEMBER 31

Implementation of the new rules regarding the VEC maintenance of the question pools took place December 31, 1986. When the FCC announced the new rules last August, the effective date was not announced pending the approval of the Office of Management and Budget (OMB) due to certain changes in record keeping requirements. This approval has now been secured from OMB. See the August 15 issue of The ARRL Letter or October "Happenings" column in QST for more details. The ARRL has filed a petition for reconsideration in this docket.

LETTER FROM THE PREZ

HAPPY NEW YEAR EVERYBODY...
THE YEARS SEEM TO PASS SO QUICKLY..I MUST BE GETTING OLD. WELL I AM HOPEFUL THAT 87 WILL BE A YEAR OF ACTIVE FUN FOR OUR CLUB..I GUESS I SHOULD EXPLAIN THAT IN MY VIGOR TO SPARK MORE ACTIVITY FROM THE MEMBERSHIP SEVERAL HAVE GOTTEN THE WRONG IMPRESSION. MY INTENTIONS WHEN WE PUBLISHED THE MEMBERSHIP SURVEY SHEET THAT WE ASKED ALL OF YOU TO COMPLETE AND RETURN WAS JUST A WAY TO STIR THE CAULDRON AND MAKE BETTER SOUP. IT WAS NEVER SAID OR INTENDED THAT IF ANY OF YOU FOR ANY REASON SIMPLY CANNOT ATTEND MEETINGS OR CANNOT "VOLUNTEER" AS AN "ACTIVE" MEMBER THAT THE D.L.A.R.C. DID NOT WANT YOU AS A MEMBER. THIS IS SIMPLY UNTRUE. WHAT I INTENDED IN THE SURVEY WAS TO GET AS MANY INACTIVE MEMBERS AS POSSIBLE TO AN ACTIVE STATUS..AT LEAST FOR 1987.
WHAT THIS AND ALL CLUBS NEED IS NEW BLOOD..A SHIFTING OF THE WORK FORCE EACH YEAR..NOT THE SAME 20 OR 30 DOING MOST OF THE WORK YEAR IN AND YEAR OUT..NEW IDEAS..NEW ACTIVITIES..NEW MEMBERS..GETTING YOUNG PEOPLE INVOLVED IN AMATEUR RADIO..THIS WILL MAKE OUR CLUB GROW..NOT JUST HAVE A LOT OF MEMBERS. MAKE NO MISTAKE..OUR MEMBERSHIP IS NECESSARY..EACH ONE OF YOU, FOR WITH LARGE MEMBERSHIP COMES A SOLID TREASURY..AND MONEY MAKES IT POSSIBLE FOR US TO BE ACTIVE IN THINGS THAT WOULD NOT BE POSSIBLE OTHERWISE.
PLEASE DO NOT FEEL THAT IF YOU CANNOT BE "ACTIVE" THAT THE CLUB DOES NOT WANT YOU..THIS IS NOT SO..WE NEED YOUR SUPPORT. IF HOWEVER YOU CAN BECOME MORE ACTIVE PLEASE RAISE YOUR HAND AND BE COUNTED.

AS YOU ALL KNOW WE HAVE SOME TURMOIL..REPEATER ABUSE..AND WORSE. MY WISH FOR THE NEW YEAR IS THAT THIS WILL END..AND WE HAVE A FUN YEAR..A YEAR FILLED WITH MUCH CLUB ACTIVITY PERSUING THE GREATEST HOBBY ON THIS PLANET.

73/88
KU3K

DLARC CLASSIFIED ADS

AEA MP-64 Interface. Yaesu FT-101ZD Mark II. Yaesu FV-101Z Ext. VFO. Shure 526T Desk Mic.
CONTACT: Don N3FEA at 759-3670 after 3 PM

KENWOOD SP-930 Speaker, MC-60 Microphone, YK88C-1 CW filter for TS-930 or 940, YG455C CW filter for 930 or 940. WELTZ SP-122 SWR Wattmeter. NYE Lo-Pass filter. TEN-TEC KR-20A Electronic Keyer.
CONTACT: Chuck WB3HVT at 759-7892 after 6 PM.

GTX-2 Crystal controlled. 10 Channels. All crystals in. Phone Patch. Home Brew modified.
CONTACT: Bud WA3BOM at 868-5783

FULL SIZE 3 element 20 meter mono-band beam. $60
CONTACT: Barry KU3X on .70 or 145.39 or at 691-8888

ICOM IC-4AT. 450 mHz HT.. Has built in PL encoder. Complete with BP-3 battery pack.

CONTACT: W3PYF $150

Ham Radio Proposal for Manned Space Station

According to the Amateur Satellite Report, the biweekly AMSAT member newsletter, representatives of NASA, AMSAT and the ARRL met in San Diego at the ARRL National Convention to lay the groundwork for a permanent amateur radio presence aboard the NASA Space Shuttle. The manned space station is due to be launched in 1995.

The kickoff meeting was organized by Roy Neal, K6DUE, recently retired from NBC News. In attendance from AMSAT was president Vern Riportella, WA2LQQ and VIce President for Manned Space Operations, Bill Tynan, W3XO. The League was represented by president Larry Price, W4RA, and Dave Sumner, K1ZZ, its Executive Vice President. NASA's Dr. Tony England, WOORE co-hosted the meeting along with Roy.

A working group headed up by amateurs from the Radio Amateur Satellite Corporation was organized to work up a proposal to be presented to NASA next year. An outline of the proposal is deadlined for November 1st. The proposal will look toward amateur radio being built into the space vehicle rather than being added later. The League may assume management of the project once it reaches a more advanced level. The project is being tagged the SSAR program, Space Station Amateur Radio.

Apparently there will be three objectives to the SSAR program. The first is recreational radio for people on board who may be in space for half a year or more at a time. The second is that those folks on board won't be able to use it all the time and it is a big investment for the amateur community to support it. The space agency want it to be available on some kind of automatic mode to amateurs on the ground..such as an OSCAR or Repeater mode. The third is an expansion of the amateur community's definition of service radio. That is to supply an education service in local communities..particularly schools. The idea is that with a permanent amateur radio presence on the space station, it may be instrumental in persuading youngsters to pursue scientific, mathematic and engineering careers.
(FROM THE W5YI REPORT by W3PYF)

REAL HAM ALERT...

How can you spot a real ham? The following are tell tale signs:

1) A real ham is incapable of throwing away a working meter movement, whether he will ever use it or not.
2) A real ham will take his absolutely mint condition HT-32 to a hamfest and try to sell it for $248 "FIRM". He will then sell this same transmitter for $18.75 to the 12-year-old neighbor who just got his Novice ticket because that is all the kid can afford. He will also throw in an expensive coaxial relay atno charge.
3) A real ham is slowly collecting parts for at least 4 projects, one of which has already appeared in the "25 Years Ago" column of QST.
4) A real ham can pick a "BY" prefix that is S-1 from underneath six stateside signals running S-9 + 20 db.
5) A real ham knows that antennas erected on calm days and during daylight hours will never perform as well as those erected in the dark and in a blizzard. Also, if it stays up during the first strong windstorm, then it was too small in the first place.
6) A real ham wishes that his tower was at least 10 feet taller no matter what height it was when erected.
7) Given the choice between Heard Island and Waikiki Beach for a vacation, the real ham will choose Heard Island (and not understand why other people think that this is peculiar).

Courtesy The Ground Wave, Saint Paul Radio Club

****

MURPHY STRIKES AGAIN

This months NEWS looks a little different because the editors computer went on the fritz and the holiday rush shortened the time that I usually have to spend on it. I do however want to take this opportunity to thank all those who have helped prepare the NEWS in 1986, especially Clarence W3PYF. I hope that we can get a few more reporters and writers for 1987. If you are interested please contact KA3EED at 759-6306.

PACIFIC TYPHOON

A major typhoon hit the Marianas Islands of Saipan and Tinian December 3. Upon hearing about the typhoon, Field Services Department at HQ called the State Department for confirmation and then drafted a W1AW bulletin alerting amateurs to the event and the possibility of resulting traffic and communications requests from the area. ARRL Headquarters contacted Pacific Section Manager Army Curtis, AH6P, NTS Pacific Area Staff Chairman Bill Smith, W7GHT, and the International Assistance and Traffic Net (IATN) Manager Geri Sweeney, N4GHI, to inform them of the situation. Two HQ staff members, Mike Riley, KX1B, and Lee Hayford, AH2W, monitored 15 and 20 meters on December 3 and 4 and found no related communications activity. Any further developments will be reported to the amateur community via W1AW.

****

NARTE CERTIFICATION

In the "Happenings" column of December QST, we mentioned that NARTE, The National Association of Radio and Telecommunications Engineers Inc., was granting credit for its commercial Technician Class IV Certificate to amateur Advanced and Extra Class licensees. The NARTE program covers not only broadcasting, but also includes commercial aspects of satellite, microwave systems, Land Mobile commercial systems and a wide range of telecommunications areas. The NARTE decision to grant its entry-level Class IV certificate provides a mechanism whereby the amateur may enter the commercial field providing a greater pool of technical personnel for industry. For further information contact NARTE at P.O. Box 15029, Salem, OR 97309, Tel (503)581-3336.

****

REPEATER COORDINATION--THE FCC RESPONDS

In response to a question from an individual about repeater coordination in the Kansas city area, the FCC's Ray Kowalski, Chief of the Special Services Division of the Private Radio Bureau, said "The FCC intends to rely upon state and regional councils to recognize legitimate local coordinators. The FCC will support their determinations... Revocation of regional and state council recognition of another local coordinator is prima facie evidence that the coordinator no longer has the support of a majority of those eligible to establish repeaters in the area it claims to coordinate. Stations which operate with illegitimate repeater coordination do so at their peril." The FCC further stated that "two active coordinators in the same large metropolitan area which do not take each other's coordinations into account may soon cause repeaters in the area to experience interference. And it is the licensees of these repeaters--not the coordinator--who risk sanctions if interference occurs."

****

ARRL TO FIGHT CABLE LEAKAGE
by Clarence W3PYF

Some our members will remember the talk given last year by the chief engineer of the Sammons Communications Cable Company at our meeting. With the increased usage of 145.11 and 145.39 in the area, it is apparent that other areas in the country are having trouble as well.

If you find heavy areas of interference coming in on these frequencies in your area, remember that we have been promised cooperation from both Sammons and Service Electric, advise me of the exact area of interference and I will contact the Cable company.

The following is the ARRL notice in the ARRL newsletter of their action. Once more it is a good reason to belong to the ARRL.

The ARRL has filed comments in FCC General Docket 85-301 relating to the Commission's proposal to relax the present technical restrictions on RF leakage from cable terminal devices. ARRL engineering studies have established that even present limits permit cable systems to leak RF on some amateur frequencies, producing severe interference at distances in excess of 100 feet. The FCC's proposal to permit emissions at many times the present level "is ill-advised" according to ARRL's comments.

ARRL further states that the cable operator should be responsible for disconnecting any terminal which is leaking RF in excess of FCC rules whether or not owned by the subscriber, and obligation to resolve any RF-generated interference should rest with the cable company. HQ staff has reviewed some of the comments received by FCC in this docket, and there seems to be widespread agreement that the looser RF leakage standards as proposed by FCC are hard to justify.

****

NON-FCC CERTIFIED COMPUTER DEVICES SEIZED AT LAS VEGAS COMPUTER SHOW

US Marshalls, assisted by FCC agents, seized non-certified equipment at the COMDEX computer show in Las Vegas, NV. The devices were being displayed by "Wholesale Outlet," a company based in Albany, NY. According to the FCC news release, the firm had been previously fined $2000 by FCC for offering non-certified devices for sale.

Apparently, this was caused by the "Stoner" request for part of the amateur bands to be used for this purpose.

****

1987 HANDBOOK AVAILABLE

The brand new 1987 ARRL Handbook contains a wealth of information for amateurs of all interests. In its 40 chapters containing over 1200

pages, readers will find state-of-the-art sections on subjects as diverse as amateur satellite operation, propagation, filter design, QRP or QRO HF transmitters, station accessories, even 23-cm FM television! The ARRL Handbook is a must for any technical library. The Handbook is available for $18.00 paperbound, or $27.00 clothbound. If ordering from HQ add $2.50 shipping and handling ($3.50 for UPS).

****

1986 in REVIEW

LAST YEAR - Automatic control of digital communications above 50 MHz was allowed but not for third-party traffic. Many Petitions for Reconsideration were filed and the FCC temporarily approved the third party traffic issue until they could finally rule on it. Amateurs made plans for PACSAT, a global store-and-forward "flying mailbox". Carribean hams got expanded 40-meter phone privileges.

The FCC proposed credit for written amateur radio operator examinations in February - authorizing it effective December 15th. Canada proposed to restructure its amateur service paving the way for a possible no-code entry ham ticket.

The "Hands Across America" charity project linking people from coast-to-coast utilized amateur radio as its primary communications medium. Acting on several petitions from the public, the FCC proposed voice privileges for Novice operators. The issue proved to be more controversial than anticipated.

In an Order on Amateur Frequency Coordination, the FCC decided against the concept of a single national coordinator and left it to the amateur community to determine the best use of its spectrum by refusing to get involved. The Commission did, however, recognize repeaters as having certain prior rights and placed the responsibility for resolving any interference on non-coordinated repeaters.

The Electronic Privacy Act became law and it became unlawful to monitor certain radio spectrum. The marketing of electronic equipment primarily capable of receiving this spectrum was also forbidden. OSCAR-10 suffered a fatal malfunction.

A satellite video terrorists calling himself "Captain Midnight" uplinked a signal which overtook an HBO movie. He later was caught and turned out to be an amateur radio operator opposing satellite program scrambling.

In August, Pat Sherrill, N5PS, an Extra Class (Oklahoma City) amateur operator snapped over a work dispute and killed fourteen co-workers before turning the gun on himself and taking his own life.
The FCC's Office of Plans and Policy issued "Working Paper #20" in September suggesting the need for many Personal Radio Service changes ...including several Amateur Radio Service matters.
US amateurs provided communications during a massive Central American earthquake that levelled portions of San Salvador in October.

The FCC turned maintenance of the various amateur radio test question pools over to the various VEC's effective December 31st. Several protesting Petitions for Reconsideration were filed.

Partially due to fine amateur work American amateurs did during the Mexican earthquake, Mexico started issuing Class II "courtesy" licenses to US amateurs in 1986. A Mexican Class II license allows 250 watts on all bands. It caused quite a commotion in the US when many Novice level amateurs obtained free Mexican licenses and started talking back to the US on HF.

o What is Ahead for 1987?

The big amateur radio item in the United States next year will be, of course, Novice Enhancement. We probably won't see anything on it for at least 30 and possibly 60 days, but it is a "sure thing". The question is what will be adopted compared to what was proposed. There are bound to be some changes - maybe many changes - over the original NPRM. Strong rumors are that getting a Novice license will not be as easy as it has been in the past.

It will also be interesting to see what happens as VEC's assume the various question pools. Hopefully, we'll only have one set of standardized questions.

****

$50 TO RENEW YOUR HAM TICKET?

A private company is sending official-looking literature to amateurs offering assistance with their license renewal, and it is possible some amateurs may think the literature is from FCC. The catch is that the fee the private company charges for this service is $50. Of course, FCC does not charge a fee to renew an amateur license, and the renewal Form 610 is available free from any FCC field office or ARRL HQ upon receipt of an SASE. FCC or ARRL HQ can also provide answers to any questions you may have about renewing your license, so save your money!

Renewal forms are available from Treasurer, KB3RI and should be made through the club.

****

PACKET RUNS WELL AT NYC MARATHON

For the first time in its 11 years of providing Amateur Radio communications to the New York City Marathon, the group of 397 amateurs included a packet-radio effort. Members of New Jersey's Radio Amateur Telecommunications Society (RATS) and Packet of Long Island (POLI) teamed up to provide a packet network reporting runners who dropped out of the race held November 9.

This year's race had 20,710 starters and 1090 dropped out before the end of the race. While the 21 stations on the traditional voice net

reported 685 of these, the two packet stations on the course reported an additional 303. All of this took place in about five hours. Packet handled about 35% of the total dropout traffic.

Before the race, a dedicated digipeater was installed that "looked at" both packet stations on the course and the packet net control station at the finish area. The data format used included the mile point, time of the event, number of the runner and a disposition code that explained where the runner would go (such as return to their hotel, public transit to the finish area or taken to hospital, with the name of the hospital provided).

The information, as received, was entered into a data base that converted the runner number to a name and printed a 3x5 file card giving all of the information received as well as the runner's address. These cards were then used at inquiry desks. If a runner was late in arriving at the finish area, the family of the runner could then go to an inquiry desk and the cards would be checked to see if the runner had dropped out of the race. If the runner had dropped out, all relevant information would be given to the family member.

If two stations were successful, what could four or five do? We plan to find out next year when 25,000 runners will be allowed to start. The operation this year was a practical demonstration that proved packet radio's ability to be integrated into a large-scale amateur activity. -- Steve Mendelsohn, WA2DHF

****

BOY SCOUTS & AMATEUR RADIO

The October issue of Boy's Life, the membership journal of the Boy Scouts of America, featured an article on SWLing and Amateur Radio. The inquiries from readers about Amateur Radio are being answered by HQ. Also, the new Radio Merit Badge pamphlet, written by Mike Brown, WB2JWD, should be available to scouts in January. The pamphlet consists of basic information concerning Broadcasting, SWLing and Amateur Radio. There are also plans to build a new K2BSA amateur station at the BSA National office in Irving, Texas.

****

$4.35 FOR ARRL VEC EXAMS AFTER JANUARY 1

Effective January 1, 1987 the maximum allowable reimbursement for out-of-pocket costs for a volunteer administered Amateur Radio examination will be $4.37. This amount is based on a 1.87% increase in the Department of Labor Consumer Price index between October 1, 1985 and September 30, 1986.

Each volunteer examiner and each volunteer examinees coordinator may be reimbursed by examiners for out-of-pocket expense incurred in preparing, processing or administering examinations for amateur operator licensees above the Novice class. The amount of the reimbursement from any examinee for any one examination at a particular session, regardless of the number of examination elements taken, must not exceed $4.37.

ARRL VEC will charge $4.35 after January 1.

***

BAHRAIN - Alain, F6BFH, just arriving at this first stop in his world tour, said he will be in the usual cw and ssb DX slots of as many bands as possible, probably signing /A9. There for about a week, his next stop, VS6, will be followed by 9M8, FKØ and FOØ before his visits to several cities in the USA. QSL to his home CBA.

***

CHINA - BY9GA, in Zone 23, is an almost-nightly attendee in the W7PHO Family Hour near 14,227 KHz from about 2330 UTC. QSL to Box 12, Lanzhou, P.R.C. (Be sure to enclose a large SAE - at least a No. 10 envelope).

***

CROZET I. - FT8WA on 14,030 KHz (long-path) at 1300 UTC and 14,236 KHz at 0001 UTC. QSL via F6FNU.

***

HEARD I. - Now to 20/21 January. At presstime we're patiently (?) awaiting the start of the promised operation by VKØDA, a member of the scientific team.

***

JOHNSTON I. - Now - for 1 year. KL7LF/KH3 on 10-80, mostly ssb, RTTY and AMTOR. Joe will run cw, too, including sessions in the Novice Bands (hopefully to get them interested in DXing - and upgrading). QSL via KL7VZ, either to his CBA or via the Alaska QSL Bureau.

***

KAMPUCHEA - XU1SS, with YL Kem San at the mike, is aboard the Family Hour, 14,227 KHz weekends at 2300 UTC. Interesting variations in propagation paths on successive nights enable all areas to ultimately make this contact. New antennas there have resulted in generally-improved signals. QSL via JA1HQG.

***

MAURITANIA - 5T5XX on 7004 KHz at 0200 UTC and 14,037 KHz from 2000 UTC. QSL via DL1VJ.

***

MAYOTTE - The Colvin's, signing FH/W6KG, offer cw in the bottom 20 KHz of 15 and 20 meters between 1300 and 2100 UTC interspersed with ssb sessions on 14,183, 195 and 14,205 KHz. From about 0100 to 0330 UTC they run cw at the low end of 7 MHz. Apparently encountering licensing problems for some of their intended stops, they may abbreviate the tour. QSL via YASME.

***

REPUBLIC OF CAPE VERDE - D44BC "lives" on 14,028 KHz daily from about 2000 UTC. QSL to Box 36, Mindelo, Rep. of Cape Verde.

***

SEYCHELLES - S79WHW on 14,183 KHz at 1730 UTC relating his experiences before and since his long-time retirement on the Island. Interesting! QSL to his CBA.

***

SO. SHETLAND IS. - Momentarily - to 18 Dec. Delayed by storms, 3G9BSQ should be appearing about now. The group, which includes CE3s BFZ, CKE and JQH, plans cw about 25 KHz above the low ends of 10-80 and ssb on or near 3785, 7245, 14,195, 21,295 and 28,595 KHz. RTTY was being considered. QSL to P.O. Box 13312, Santiago, Chile.

***

THE GAMBIA - 10 - 18 Dec. Appending /C56, G4s LJA, PCB, RUT, WJZ, YPU and YRW plan to be on 10-160 plus satellite. ... C53FJ visits the W7PHO Net on 14,227 KHz from 2100 UTC while C53FH runs solo at that hour near 14,239 KHz. QSL to Box 165, Banjul, The Gambia, Africa.

***

TOGO - 5V7WD, on 14,205 KHz at 2130 UTC, is also QRV on 14,265 KHz following his 2100 UTC Monday and Friday skeds with his QSL Manager, WB4LFM.

THE DELAWARE-LEHIGH AMATEUR RADIO CLUB, INC.

NEWS

RD #4
GREYSTONE BUILDING
NAZARETH, PA
18064

All Amateur Radio Operators are invited to participate in the DLARC Nets on 146.70 W3OK/rpt.
The Nets are held on Sundays at 9:30 AM and on Wednesdays at 7:00 PM.
The alternate repeater for these Nets is 145.110 W3PYF/rpt.

****

The DLARC NEWS is the Official Publication of the Delaware Lehigh Amateur Radio Club Inc.

****

1987
CLUB OFFICERS

President - Bob Kratz.....KU3K...866-5879
Vice-President - Bob Dickinson..W2CCE..967-1393
Secretary - Diane Smith.....NB3L...863-5698
Treasurer - Robert Mulrooney....KB3RI..253-7710
Trustee - Rick Saeger.....K3OO...863-4971

****

BOARD OF DIRECTORS

Don Curtis.....W3LR...282-4459
Ken Field.....KA3EED.759-6306
Barry Kery.....KU3X...691-8888
Clarence Snyder.....W3PYF..252-2109
Norm Zoltack.....K3NZ...799-4044

****

NEWS STAFF

Editor - Ken Field.....KA3EED.759-6306
Co-Editor - Clarence Snyder.....W3PYF..252-2109
DX Column - Norm Zoltack.....K3NZ...799-4044
Circulation - Dick Peischl.....KC3CR..759-0294
Digital Column - Joel Elston....K9TBD..252-1515
Mailing List - Clarence Snyder..W3PYF..252-2109
Printer - Norm Zoltack.....K3NZ...799-4044

****

CLUB MEETING NIGHT

All regular meetings of the D.L.A.R.C. are held on the first Thursday of each month at 7:30 PM in the Greystone Building at Gracedale.
Phone....759-2600

****

Any comments or articles contributed to this newsletter should be addressed to:
KEN FIELD
5632 SULLIVAN TRAIL
EASTON, PA 18042

LEHIGH VALLEY PM JAN 3 1987 18001

ALWAYS USE ZIP CODE USA 22

Raymond P. Bilger W3TDF
RD#1 Box 178 State Road
Coopersburg, PA 18036

ARRL

AR N S
Amateur Radio News Service