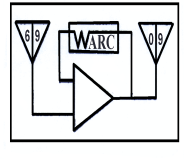




# FEEDBACK



Warminster Amateur Radio Club

Web Site <http://www.k3dn.org>

May 2002

## Next Meeting May 2nd - Windows Operating Systems

### President's Message



Warminster Amateur Radio Club's annual Hamfest is approaching on Sunday, May 5th at the Grange Fair grounds in Wrightstown, Pennsylvania. This is the club's biggest operating event in that the income from it is used for a majority of club expenses throughout the year. Your membership dues cover only a fraction of these expenses and if you receive your copy of Feedback by mail, then almost all of your dues go to that. To continue to make the Warminster ARC hamfest one of the best in the area and to keep the club operating your help is needed for either set-up on May 4th, during the Hamfest or with clean up following it. Even if you can only devote a couple of hours, that would be very much appreciated. Jobs vary from handling vendor check-ins, vendor parking (always a great way to see what they're planning to sell) and buyer parking. We also have a club table to oversee as well as a VE session, so not all jobs require you to walk around a lot. Contact Bill Strunk K3ZMA at (215) 822-0749 or at the next meeting to sign up. The May meeting also brings us elections for President, Vice-President, Secretary and Treasurer. So do not forget to vote by either mailing in your ballot (enclosed with this issue of Feedback) or by bringing it to the meeting. Please remember that we do not use Chicago voting rules in the club! Nominations from the floor will also be accepted or if you are interested in one of these positions you can contact Mike Patton W3MJP who is chairing the Nominations Committee. As per the Club's constitution and by-laws you do have to be a regular member in good standing to hold office.

### May Special Events

**Vryheid, KwaZulu-Natal, South Africa:** Midlands Amateur Radio Club, ZS1ØØABW. 1400Z **May 3** to 0800Z **May 5**. Commemorating the roles played by the British, Boers and brave Zulus during the Anglo Boer SA War of 1899-1902. 40, 20 and (eve) 80 m. QSL. Midlands ARC, PO Box 100220, Scottsville 3209, South Africa, or via Bureau. zs5wi@iafrica.com.

**Poughkeepsie, NY:** Poughkeepsie Amateur Radio Club, W2CVT. 1400Z to 2000Z **May 4**. Special event station from the Samuel F. B. Morse home in Poughkeepsie, New York. 28.110 21.125 14.250 7.125. Certificate. Don Stein, W2PTF, 3 Little Rd, Wappingers Falls, NY 12590.

**West Orange, NJ:** Nutley Amateur Radio Society, W2GLQ. 1200Z **May 4** to 2100Z **May 5**. From the Edison Historical Labs, honoring the inventor of the light bulb, phonograph and many other devices that make our lives simpler. General portions of the 10-40 m bands (28.475). QSL. Nutley ARS, 169 Chestnut St, Nutley, NJ 07110.

**St Louis, MO:** American Archives Amateur Radio, KC8KGA. 1600Z **May 17** to 1600Z **May 19**. Commemorating the 75th Anniversary of Lindbergh's Flight from New York to Paris. 14.270 7.270. Certificate. Dave Langston, KB8RAP, c/o Maritz, 1000 Town Center, Southfield, MI 48170.

**White River Junction, VT:** Twin State ARC and area amateurs, W1FN. 1400Z to 2000Z **May 18**. Armed Forces Day 2002, honoring our service men and women. 28.360 21.360 14.260 7.260. Certificate and QSL. Karl Zuege, KB1DSB, 2176 Drake Rd, Bomoseen, VT 05732 05732.

**Pierre, SD:** Pierre Amateur Radio Club, WØPIR. 1700Z **May 18** to 0000Z **May 19**. Lewis & Clark Expedition. 28.440 14.250 7.250 3.950. Certificate. Gary Wallace, AAØCT, PO Box 1261, Pierre, SD 57501-1261. <http://www.rmrlent.dtgnet.com/parc/lcspec.html>.

**Camden, NJ:** Battleship New Jersey Amateur Radio Station, NJ2BB. 1200Z to 2000Z **May 25**. 59th anniversary of the commissioning of USS *New Jersey* BB62. 28.462 21.362 14.262 7.262. QSL. Margaret Burgess, KB2BRR, 150 Schooner Ave, Barnagat, NJ 08005.

**Baton Rouge, LA:** USS *Kidd* ARC/Baton Rouge ARC, W5KID. 1400Z to 2200Z **May 27**. Honoring Memorial Day. SSB: 10, 15, 17, 20 m General band. QSL. W5KID, 305 River Rd, Baton Rouge, LA 70803.

**Belleville, MI:** Yankee Air Force Museum, W8YAF. 1200Z to 2000Z **May 27**. Observing Memorial Day at the Yankee Air Museum at Willow Run Airport. 7.270. Certificate. Frank A. Nagy, N8BIB, 24315 Waltz Rd, New Boston, MI 48164-1965.

*Courtesy The ARRL Newsletter*

We are still looking for someone to fill Burt Ludin N3YVH's shoes as chairman of the Holiday Dinner. Burt has done a terrific job over the years but now would just like to be the event's Master of Ceremonies. The job's principle responsibility is searching out door and raffle prizes. Several of these have been constant including the raffle of a dinner for two at the Inn on Blueberry Hill. If you would like to give it a shot, let one of the officers or Burt know and we will get you set-up with all the tricks of the trade. I hope to see all of you at the May meeting. Until then...  
73,  
Mark Kempisty N3GNW  
President

*(Continued on page 2)*

*The Warminster Amateur Radio Club is a volunteer-based organization. Without the selfless work performed by volunteers such as yourself, there would be no Club.*



(Continued from page 1)

## FROM THE VICE PRESIDENT:

Here's some info on upcoming meetings:

The speaker for our May meeting will be Ron Dunbar of the Philadelphia Area Computer Society. Ron is an officer of this organization and his major area of interest and expertise is Windows Operating Systems. Ron will provide some information about the differences between Windows 95, 98, ME and NT. And he will share his "hands on" experience in troubleshooting different functions of these operating systems. Ron is a retired Communications Engineer.

The June meeting will be our Home Brew and Pizza Night. All members and visitors are encouraged to bring in the projects they have been working on these past few months. They will be asked to share their experience of working on them and give advice to anyone contemplating a similar undertaking.

In July, our own Fred Rice W3KIO and Al Tribble W3STW will make a presentation of Digital Communications. Although their primary focus will be PSK-31, I am told that the concepts apply to all forms of amateur radio digital communication.

The following is an email that came to me a few weeks ago. I read it at the last club meeting, but thought that, as many hams as it could reach should read it.

Hello,

Is there anyone I can contact concerning Lee Decker? I realize that he is a Silent Key now.

I was in an orphanage when I was about 13 and Lee Decker helped set up an amateur station, antenna, and he officiated at my novice class exam when I became a ham

back then.

I guess I just wanted to somehow give him (via friends and family) a thank you for helping someone who couldn't help themselves at that time.

My call sign was K3PWH, and I've been off the air for more years than I can remember, but I do remember Lee's kindness. I'm 55 now, and Lee was one of the few bright points in my rather dim life.

Thank You.

Sincerely,

John Lacey

Hams are very special people. Aside from the common interest in radio communications, amateur radio operators like to give their time and talent to those who would like to learn something new, and respect the knowledge and experience that only comes with time. Some of you may know Lee Decker. A club member told me about the way that Mr. Decker impressed others around him. I hope that when I finally am gone from this earth that I've left the same kind of impression on people that Mr. Lacey saw in Lee Decker. If any of you would like to contact Mr. Lacey his email address is jlacey@ix.netcom.com.

**April 4, 2002**

**Dave, AA3UR, Secretary**

The meeting was called to order by the President, Mark Kempisty, N3GNW. Thirty-five people were present. During the last VE session, two people upgraded. One of them was Tony N3YNS, who upgraded to Extra. The minutes from the March

meeting, as printed in *Feedback* were approved.

The Hamfest will be held on May 5, 2002 at the Grange Fairgrounds. This is the major fund-raiser for the club and needs the active support of club members. Club elections for President, Vice-president, Secretary, and Treasurer are coming up. Ballots will be in the May *Feedback*. It is time for updating your directory information. If you have had a change in address, including email, let Bud, K3TPM know or do it on-line on the club website. There will be an air show this year with the Air Force Thunderbirds, September 14-15, 2002. Burt, N3YVH, is stepping down as the Holiday Dinner Chair and we need a volunteer to step in. Randy, N3LGE, has asked that two people assist him: one as an alternate and another as an assistant. The duties will amount to picking up doughnuts before the meeting, making coffee, arranging drinks, and helping to clean up after the meeting.

Tony, N3YNH went over the next few meeting programs. May's program will be on the Windows operating system and buying used computer equipment with a member of the Philadelphia Area Computing Society. June's program will be a homebrew and pizza night.

Vahan KB3DHU gave the treasurer's report.

Dave, AA3UR, had nothing to report from the Secretary. Tony, N3YNH, added that he had an email from John Lacey looking for anyone who might know Lee Decker, K3PWH or any of his family. Lee was John's Elmer and he would like to get back in touch.

Bill KA3ZMA reported the progress made on the Hamfest. There will be a repeater announcement regarding the hamfest. Bill wanted to thank all those who helped mail the flyers. Volunteer sheets were passed out. We need helpers to sign up for the

(Continued on page 3)

*(Continued from page 2)*

various duties. This includes parking for vendors, parking for visitors, collecting admissions, Saturday preparation time, and Sunday afternoon clean-up time. Please let him know if you have a favorite vendor who should be informed of the Hamfest and let anyone interested in attending know about it.

Bud K3TPM and Mark WA3QBU covered the membership committee activities.

Repeater: A hamfest announcement will be added. Corporate approval to start digging the hole for the antenna foundation has been granted. The repeater is up and running with only occasional, weak, and intermittent interference. Brian, N3EXA, will be checking the 440 antenna to determine whether we should use it or obtain a new one.

George, N3HBT reported that the following public service events:

1. This Saturday, Pennypack Park Conservancy near Hatboro. Need 6 to 10 to support up to 250 people to clean up the creek area. 9:30 AM to 2:00 PM Lunch follows.
2. March of Dimes 4/28/02: Doc is running the walk in Peace Valley and 15 Operators are needed in Core Creek as this walk will take place partly on public roads. 12 mile course, 7:30 AM- Noon

Hugh, N3SOQ will hold the Spring Adopt a Highway clean up on Saturday 4/14/02. Meet for breakfast at Wal-Mart, Jacksonville and Street Roads 9:00 AM.

Members needing RACES photo id's had their pictures taken.

George KA3WXV reported that there were three students from the course attending the meeting tonight. Two additional people had upgraded to Extra Class in the last VE session as a result of the Extra class. If there is enough interest, they will try to do it again.

Stu, K2QBU reminded us about Field

Day, June 22-23, 2002. He is about to order materials, so if there is anything you want to remind him about, let him know.

Drex, is looking for the Radio Shack Forest Sims Notebook on the 555 timer. Please let him know if you have one.

Old business: The club QSL cards have been shipped.

VE Sessions: The last VE session had lots of people show up. Approximately 70% passed.

New Business: The club results for the PA QSO party were not sent in on time. Marty, due to extenuating circumstances was unable to get the logs in.

The meeting was adjourned, followed by refreshments, 50/50 drawing, and Bill's presentation of what's inside your receiver.

## WARC HAMFEST DIRECTIONS

From central NJ:  
Take I-195 to I-295 and go south into PA, take I-95 south to exit 49, PA route 332. At top of the exit ramp turn right onto PA route 332 west until it joins with PA route 413 north. Follow PA route 413 north from then on until Penns Park road on left, turn left onto Penns Park road and the WARC hamfest is on the left about 200 yards on the left.

From northern NJ:  
Take NJ route 202 south into PA and follow PA route 202 south until it joins with PA route 263 and follow PA route 263 south until the junction of PA route 413, turn left onto PA route 413 and follow PA route 413 south until the junction of PA route 232, stay on PA route 413 south for 1 mile after the junction of PA route 232 and turn right onto Penns Park road, WARC hamfest is 200 yards on the left.

From northern PA:  
Take the northeast extension of the PA turnpike (PA route 9) south to the Quakertown exit and turn left onto PA

route 663 to the junction of PA route 309, cross over PA route 309 and take PA route 313 east to the junction of PA route 263, turn left onto PA route 263 and take it north to the junction of PA route 413, turn right and follow PA route 413 south to the junction of PA route 232, cross over PA route 232 and stay on PA route 413 south for 1 mile and turn right onto Penns Park road, WARC hamfest is 200 yards on the left.

From central PA:  
Take the PA turnpike east to the Willow Grove exit 27, bear right onto PA route 611 north, follow PA route 611 north to the junction of PA route 132, turn right onto PA route 132 east until the junction of PA route 332, turn left onto PA route 332 east, follow PA route 332 east until the junction of PA route 232, turn left onto PA route 232 north, follow PA route 232 north for 3 miles until the cross street of Penns Park road, turn right onto Penns Park road, WARC hamfest is 1/2 mile on the right.

From Philadelphia and south:  
Take I-95 north to exit 49 PA route 332, at the top of the exit ramp turn left onto PA route 332 west, follow PA route 332 west until it joins with PA route 413 north, follow PA route 413 north to Penns Park road, turn left onto Penns Park road, WARC hamfest is 200 yards on the left.

George Brechmann  
N3HBT@JUNO.COM

## PUBLIC SERVICE

Golf outings  
Thursday, June 6 at the 5 Ponds golf course in Warminster. Times from 7:30 am to 1:30 pm. Need 10 operators to staff the event for the Warminster chamber of commerce. Lunch after the event will be provided.  
Monday, October 14 for the

*(Continued on page 4)*

(Continued from page 3)

Warminster parks and recreation department.

Same as above. Lunch after the event. Warminster Memorial day parade Monday, May 27 from 10:00 am until 1:00 pm. Need about 12 hams to work the parade. Refreshments after the parade.

To sign up for any of the above events contact George Brechmann N3HBT at (215)-443-5656 or n3hbt@juno.com

### ADOPT-A-HIGHWAY

Judging by the following items borrowed from the State's adopt-a-highway web site our efforts are very much needed and appreciated. With that in mind I extend my appreciation to the following who made it out Sunday 04-14-02. Without the support of people like these, the adopt-a-highway program could never be the success that it is.

Hugh-N3SOQ

Tom-WA3TQJ

Bill-K3MFI

Randy-N3LJE

Elaine-N3TMP AND

George-N3HBT

You Can Beautify Pennsylvania Two Miles at a Time

"Adopt-A-Highway offers Pennsylvania citizens the opportunity to show their pride in our beautiful state by caring for the environment. We all know that a more attractive Pennsylvania is more attractive to our tourists and to businesses."

-- Tom Ridge, Governor

"Thousands of caring citizens have given their time to help in our quest to keep Pennsylvania beautiful and litter-free. With your help, we can continue our commitment to leave our children a cleaner, healthier and more beautiful Pennsylvania."

-- Bradley L. Mallory, Secretary of Transportation

Food wrappers, aluminum cans, newspapers, and cigarette packs. From the city to the countryside, this is the trash that many careless people leave on Pennsylvania's highways. It's not a pretty sight, and it certainly does not make a good impression for the people who are traveling through Pennsylvania.

Adopt-A-Highway is an effective way to reduce the overall cost of litter pick-up in Pennsylvania. By volunteering to clear a two mile section of state highway four times a year, you are caring for the environment, and helping to minimize our maintenance cost.

You can help to create a good first impression of Pennsylvania, and you can help spread the message that littering along our highways hurts our environment. Under PennDOT's Adopt-A-Highway Program, you, your civic or volunteer group can help beautify Pennsylvania two miles at a time.

### HERE IS HOW YOU CAN MAKE A PERSONAL CONTRIBUTION TO A CLEANER ENVIRONMENT UNDER PennDOT's ADOPT-A-HIGHWAY PROGRAM

The Program is simple . . .

You, your civic or volunteer group may sign a two-year agreement with PennDOT to adopt a two mile portion of state highway and promise to pick-up litter at least four times a year. In return, PennDOT will post signs along the highway giving you or your group full credit for your efforts.

Your safety is important . . . PennDOT will provide complete safety training for volunteers as well as orange safety vests and highway warning signs to be used during litter pick-ups. The Department also provides trash bags and will pick-up the bagged litter from the roadside.

Volunteers must be at least eight years old, and participants under 18 must be accompanied by adults.

Take care of the environment . . . You can join a popular effort to cleanup litter on Pennsylvania's collective front yard -- its 150,000 acres of roadside. By helping to keep this great state clean for our own residents as well as for the millions of visitors who travel our roads every year, you are making an important Contribution to take care of the environment.

### CLUB STATION

The WARC club station is open to anyone with an interest, on Tuesday evenings between the hours of 7:00 and 9:00 pm. For further information, call George Brechmann N3HBT at 215-443-5656.

### WARC ALUMNI MEMBERSHIP

Attention all former WARC members. At the March 4, 1999 General Meeting, revisions to our club's constitution were approved that among other things, establishes a new Alumni membership category for former WARC members who are unable to attend meeting and Club activities on a regular basis due to health considerations or travel

### WARC JACKETS, SHIRTS AND HATS

**Are available. Delivery within one month of placing order- the more we order, the lower the prices. See Bob (K3SRO) or call him at 215-822-7474 for order forms and cost information.**

*(Continued from page 4)*

impediments. Dues for the Alumni membership were established at \$8.00 annually to cover the costs of printing and mailing our monthly FEEDBACK newsletter. Contact Alumni Coordinator Randy Gehman (N3LJE) or Membership co-chair Bud Bechtel (K3TPM) or Membership co-chair Mark Hinkel (WA3QVU) for more information.

**FOR SALE**

**For Sale List - WC3Q - Silent Key**

The following are the components of the main station of Brian Cassidy, WC3Q, now a silent key. All are in very good condition and can be bought as a group or Individually. However, I will not sell the RS 35M power supply until after the IC 735 Transceiver is sold.

Icom IC 735 HF all band Transceiver and general coverage receiver. Covers all Ham Bands from 160 meters through 10 meters. Operates in all modes. Power continuously adjustable from 10 watts to 40 watts output on AM, and from 10 watts to 200 watts input on FM, & CW, and from 10 watts

to 200 watts PEP on SSB. General coverage receiver covers 100 KHz through 30 MHz. Comes with HM 12 microphone and both operating manual and service manual. Have original Box. Bought new for \$949.95, asking \$400.00.

Astron RS 35M Metered Power Supply, 13.8 Volts, 25 amp. continuous, 35 amp surge. Bought new, \$164.95, asking \$80.00.

Palomar Engineering Model M 835 LED Bar Graph Auto SWR and Power Meter.

Frequency range 1 to 30 MHz. Power ranges, 0-2, 0-20, 0-200, and 0-2000 watts. SWR range, 1.0 to 10+. UHF connectors. Power required, 12 Volt DC at 800 MA. Bought new \$203.95, asking \$80.00. Includes Manual.

The following items were not part of his main station:

Astron RS 12A, BB power Supply. 12 Volt DC, 9 amp continuous, 12 amp. surge. New \$79.99, asking \$40.00.

Contact Harold Cassidy (Brian's father) directly;  
E-mail: Harold Cassidy K3OMX@juno.com  
Phone: 215-675-3845

**WEB SITES OF INTEREST**

The following were contributed by a club member. If you have sites you think might be of interest to members, let me know. *(The Editor)*

- www.qrz.com
- www.arnewline.org
- www.radioage.com

**ARRL Certification and Continuing Education course registration:**

Registration for the Level I Amateur Radio Emergency Communications Course (EC-001) opens Monday, May 6, and registration for Level II (EC-002) opens Monday, May 13, at 4 PM on both days. Emergency communications courses must be completed in order, starting with Level I. To learn more, visit the ARRL Certification and Continuing Education Web page <<http://www.arrl.org/cce>> and the C-CE Links found there. Don't miss the ARRL Course Listing Web page <<http://www.arrl.org/cce/courses.html>>. For more information, contact Certification and Continuing Education Coordinator Dan Miller, K3UFG, [cce@arrl.org](mailto:cce@arrl.org).

*Courtesy The ARRL Newsletter*

**2002 Contest Calendar**

**Month**

**Contest**

**June**

- 08 - 10 ARRL June VHF QSO Party
- 22 - 23 ARRL Field Day

**July**

- 13 - 14 IARU HF World Championships

**August**

- 03 - 04 ARRL UHF Contest
- 17 - 18 ARRL 10 GHz and Up Contest

**September**

- 14 - 16 ARRL September VHF QSO Party
- 21 - 22 ARRL 10 GHz and Up Contest



**➤ CLUB EQUIPMENT**

WARC members can borrow club equipment- see the club Vice-President, who is responsible for keeping track of club property. In addition to the normal HAM JUNQUE, we have two ICOM HT's with accessories (one for 2 meters; one for 440mhz) and an ICOM 2 meter all-mode available. WARC policy is to make club equipment available on a three (3) month loan policy to club members. As custodian of club property, you will have to sign a form acknowledging your financial responsibility to WARC in the event the loaned equipment is lost or damaged.  
DE, Mark Kempisty, N3GNW

## ATLANTIC DIVISION HAMFESTS - 2002

+ *indicates ARRL Hamfest*

5 May 2002 + Warminster ARC Wrightstown (Bucks County), PA

<http://www.k3dn.org>

11 May 2002 + Appalachian AR Group Fredericksburg, PA

<http://www.aa3rg.org>

16-Jun-2002 + Frederick ARC Frederick, MD

<http://www.qsl.net/k3erm>

7 Jul 2002 + Murgas ARC Wilkes-Barre (Dallas), PA

<http://www.qsl.net/k3ytl>

### CONVENTIONS and CONFERENCES

8 Jun 2002 \* Eastern Pennsylvania Section Convention Bloomsburg, PA

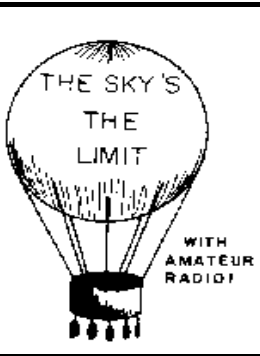
Columbia Montour ARC <http://www.qsl.net/cm-arc>

*73' de Bernie Fuller N3EFN, Director Atlantic Division ARRL*

### V.E. TEST LOCATIONS

Confirm all information, in advance, with the contact person. Licensed applicants must bring the original, and one photocopy of their license. All applicants, including children, must bring two forms of positive ID. Also bring the original, and a copy, of any Certificate of Successful Completion needed to prove current status. The ARRL VEC'S 2002 test fee is **\$10.00**.

- ◆ **Warminster Amateur Radio Club**, Monthly, Last Wed. 7:00 pm - Tom Michaud, WA3TQJ, 215-343-3494.
- ◆ **Bellmawr, NJ**, Monthly, 3rd Thursday - Bill Helmatag - 609-546-7710.
- ◆ **Levittown, PA**, Monthly, 1st Saturday - George LeNoir, WR3B, 215-943-4886.
- ◆ **Telford, PA**, Monthly, 3rd Monday - Joe Burgess, W3PNL, 215-723-6697.
- ◆ **Philadelphia, PA**, Monthly, 1st Thursday - 6:00 pm Philmont Mobile Radio Club at the Franklin Institute Dusty Rhoads, ND3Q, 215-482-0386



#### *The Warminster Amateur Radio Club Announces Free Ham Radio Instructional Classes*

If you're interested in Ham Radio, or think you might be, this is your opportunity. Perhaps you'd like to learn about digital communications, Morse code, VHF, UHF, satellite, or perhaps you'd rather sit down and chat with someone in South Africa, Russia, Great Britain or in the space shuttle.

We'll help you learn the theory and practices that make for a most enjoyable hobby. There's no telling just how far you'll go unless you make the first move and give yourself a chance to explore the world.

**Entry level classes started: March 11, 2002**

**At The Benjamin Wilson Senior Center**

**580 Delmont Avenue, Warminster, PA**

**For info. [altemus@gac.usa.com](mailto:altemus@gac.usa.com) or call:215-855-3856 , 6 to 10 pm Ask for George**

### Area Repeaters

VHF	
145.310	R.F. Hill
145.350	Doylestown R.C.
145.525	Penn Wireless
146.685	Holmesburg
146.925	Willingboro
147.000	Ham Buergers
147.030	Phil-Mont
147.090	Warminster
147.165	Delmont R.C.
147.270	Frankford
147.300	BEARS
147.390	CBRA
145.330	Hilltown
220	
224.580	PackRats
UHF	
443.250	TAG
443.050	Metro-Comm
443.950	Warminster
444.200	BEARS
449.325	KA3WXV
447.475	WR3B
447.625	WE3E
448.225	Penn Wireless
6 Mtr	
53.030	WA3BXW
53.230	N3DQZ
53.370	K3MFI
1296	
1294.100	K3PHL (PL 127.3 as needed)

#### Goddard ARC

##### Shuttle Rebroadcast Frequencies

Frequency	Mode	Band
3,860 kHz	(LSB)	80 meters
7,185 kHz	(LSB)	40 meters
14,295 kHz	(USB)	20 meters
21,395 kHz	(USB)	15 meters
28,650 kHz	(USB)	10 meters
147.45 MHz	(FM Simplex)	2 meters

#### Metro-Link repeater network

29.62	Chester, PA
147.135	Buckshootum, NJ
147.315	Chester, PA
223.96	Millville, NJ
223.98	Ocean city, NJ
224.68	Eagleville, PA
224.96	Chester, PA
443.00	Linwood, PA
443.05	Chester, PA

### Net Schedules

Sunday	2100	10 Meter Net	28.440 MHz
Wednesday	2030	2 Meter Net	147.09 Rptr.
Wednesday	2030	Linked w/ 2 Meter Net	443.95 Rptr.
Sunday	2030	Informal Net	223.5 Simplex
Thursday	2000	Bucks Cnty RACES Net	145.35 Rptr.
Thursday	1900	Mont. Cnty RACES Net	146.235 Rptr.



**Are you submitting an article for the Feedback ?**

Contributions of articles to be published are always accepted for consideration. Please follow these guidelines:

- Submit in IBM format on a floppy disk.
- Or via E-Mail to:  
**wa4ywm@comcat.com**
- Or via snail mail to:  
**FEEDBACK EDITOR**  
Warminster Amateur Radio Club  
Box 113  
Warminster, Pa 18974
- Use both upper and lower case letters.
- Use your program's spell check.
- If you don't have a computer, then typewritten sheets are o.k, but please use both upper and lower case.
- Put your name and call at the beginning or end of the article, and show credits if you are using material from another source.
- Deadline for articles is the Thursday after the Club meeting.
- Volunteers are needed for folding at the Board Meeting, Ben Wilson Center, last Thursday of the month, 7:30 PM.

*Bucks Bagels*  
1179 York road (RT. 263)  
Warminster, PA  
674-1400

*"Home of the fresh, not frozen dough"*

The annual dues rate structure is as follows:

**Full Member: \$ 20.00**  
**2nd Family Member: \$ 10.00**  
**Student: \$ 10.00**  
**Alumni: \$ 8.00**  
**12th grade or under: \$ 5.00**

- Are your dues current ?
- Check the date on your Feedback mailing label.

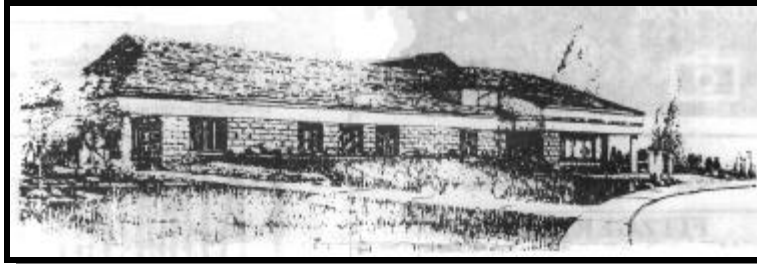
**2002 Officers**

Executive Officers

President	Mark Kempisty	N3GNW	953-1493
Vice-President	Tony Simek	N3YNH	674-5218
Secretary	Dave Porter	AA3UR	579-0597
Treasurer	Vahan Shahinian	KB3DHU	442-1243
Director (E)	Burt Ludin	N3YVH	441-4483
Director (E)	George Brechmann	N3HBT	443-5656
Director (A)	Al Konschak	WI3Z	491-9941
Director (A)	Hugh Hart	N3SOQ	773-8451
Past President	Rocky Pistilli	N3FKR	572-5330

Committee Chairpersons

Feedback Editor	Jim Elmore	WA4YWM	538-1889
Membership co-Chair	Bud Bechtel	K3TPM	659-9093
Membership co-Chair	Mark Hinkel	WA3QVU	6594449
Field Day '02	Doc Whitticar	W3GAD	968-0641
Field Day '02 co-chair	Stu Simon	K2QBU	345-9295
Grange Fair '02	Frank O'Neill	N3UQP	699-9549
Hamfest '02	Bill Strunk	K3ZMA	882-0749
January '02 VHF Contest	Joe Bagnick	N3EMA	997-2539
PA QSO Party '02	Marty Squicciarini	NR3Z	393-1492
Picnic '02	Mark Kempisty	N3GNW	953-1493
Adopt-A-Highway	Hugh Hart	N3SOQ	773-8451
Archives	Frank O'Neill	N3UQP	699-9549
Alumni Coordinator	Randy Gehman	N3LJE	822-9473
ARES Liaison	Mike Patton	W3MJP	491-9665
ARRL Liaison	Kristina Pistilli	KB3ECW	572-5330
Awards Mgr.	Vince Pironti	KD3TC	674-0446
Classes	George Altemus	KA3WXV	855-3856
DXpedition	Doc Whitticar	W3GAD	968-0641
Special Interest Groups	Ron Wenig	NY3J	638-9257
CW/QRP co-chair	Marty Squicciarini	NR3Z	393-1492
Digital/APRS co-chair	Ron Wenig	NY3J	638-9257
FM/Repeater co-chair	Mark Hinkel	WA3QVU	659-4449
HF co-chair	Dennis Shegda	N3KRE	657-7283
Satellite co-chair	Joe Bagnick	N3EMA	997-2539
VHF/UHF/MW co-chair	Al Sheppard	N3ITT	610-847-5490
Emergency Coordinator	Stu Simon	K2QBU	345-9295
Fundraising	Erik D'Onofrio	N3YNX	675-9165
Hamwear	Bob Wilderman	K3SRO	822-7474
Holiday Dinner co-chair	Berni Lindinger	N3RJD	343-5249
Holiday Dinner co-chair	Doug Mahoney	N3RJE	343-5249
Interference	Tom Michaud	WA3TQJ	343-3494
Net Manager	George Brechmann	N3HBT	443-5656
Notary Public	Whitey Metzger	AA3FT	947-0843
Publicity	Alan Ash	KA3YCG	357-9286
RACES Liaison	Bob Phillips	KA3VKU	766-0456
Refreshments	Randy Gehman	N3LJE	822-9473
Repeater Coordinator	Brian Taylor	N3EXA	257-6303
Station Trustee	George Brechmann	N3HBT	443-5656
Sunshine Club	Vince Pironti	KD3TC	674-0446
Township Liaison	George Brechmann	N3HBT	443-5656
VE License Testing	Tom Michaud	WA3TQJ	343-3494
WEB Site Coordinator	Al Konschak	WI3Z	491-9941
Youth Programs Co-Chair	Al Folsom	KY3T	343-8851
Youth Programs Co-Chair	Steve Larson	WW3Y	822-1511

**Club Station****Meetings****Talk To Us**

The Club Station - K3DN - is located at the Benjamin Wilson Senior Center, Delmont Avenue, Warminster, PA. The station is open for club members and the interested general public on non-holiday Tuesday evenings from 7 to 9 pm . The station is fully operational on HF (80 meters through 10 meters ) both phone and CW. There is an assortment of amateur radio shareware which may be copied under the shareware licensing agreement.

For additional information on the Club Station please call the Station Manager N3HBT - George at 215-443-5656.

- WARC Meetings are held the first Thursday of each month at 7:30 pm at the Benjamin Wilson Senior Center, Delmont Avenue, Warminster, PA. Talk in is available on the 147.09 & 443.950 repeaters.

**APRS on 144.390**

K3DN is also operating APRS on 144.390

**Internet Connection**

For general club correspondence:  
k3dn@k3dn.org

For Feedback articles:

wa4ywm@comcat.com

Visit our Home Page on the WWW:

<http://www.k3dn.org>

**Federal Communications  
Commission**

1270 Fairfield Road  
Gettysburg, PA 17325

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**FEEDBACK**

Warminster Amateur Radio Club  
Box 113  
Warminster, Pa 18974

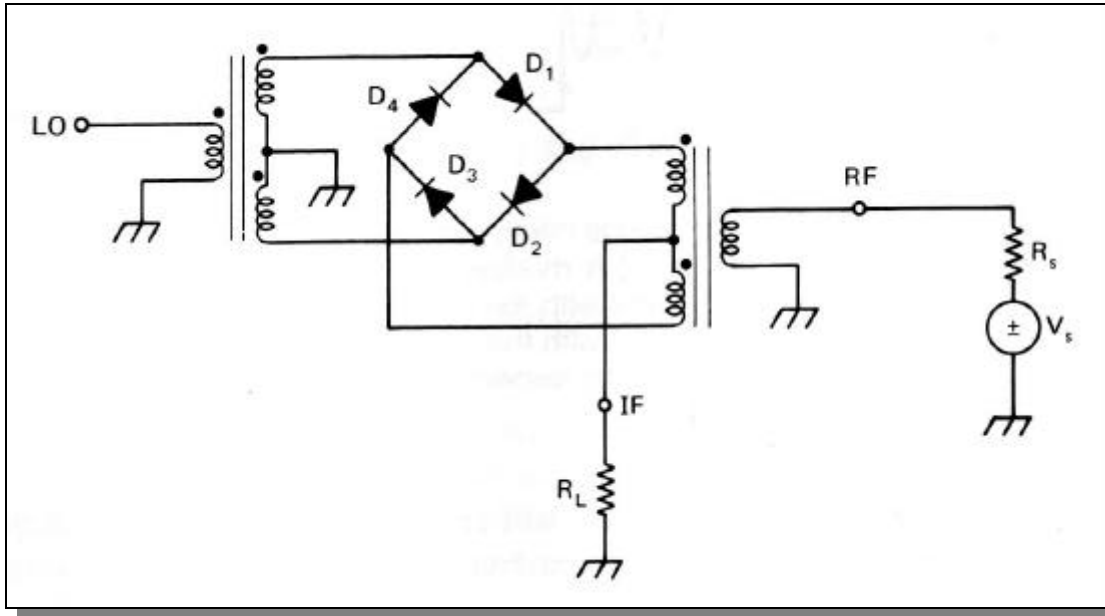
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### A Question of Balance

I want to thank Don, N3OZO, for correcting my rambling on last month about the similarity between the Doubly Balanced Mixer (DBM), shown below, and a full wave bridge rectifier. As Don stated, the diodes are connected so that they are in a ring going the same direction, whereas a full wave bridge rectifier has the diodes connected in opposing pairs. This type of mixer is sometimes called a “ring” mixer or “commutating” mixer. Don told me at the post-meeting milk and cookies session that he had run into this circuit in his work in servo systems.

As I said in the presentation, and Don echoed, one of the keys to the operation of the DBM is the balance provided by the two center-tapped transformers and the connection of the IF load ( $R_L$ ) between these balanced points. For a DBM to operate properly the LO signal must be much larger than the RF signal and effectively the only signal which turns on (forward biases) the diodes.



#### How it works

Very briefly, when the secondary of the LO transformer top end (dotted end) is positive, diodes D1 and D2 are turned on by the LO signal, and D3 and D4 are basically open circuited. Since there is a balance of one diode and  $\frac{1}{2}$  LO transformer in each leg of the circuit to the top of the RF transformer, the LO signal is balanced out at the RF transformer and no LO signal goes out the RF port. But the “on” diodes allow the RF signal to circulate from the top half of the RF transformer secondary, through the IF load (resistor) and the center tap of the LO transformer.

When the LO transformer top end (dotted end) is negative, diodes D3 and D4 are turned on by the LO signal, and D1 and D2 are now open circuited. Again there is a balanced path to the RF transformer and no LO signal goes out the RF port of the mixer. But this time the lower half of the RF transformer secondary supplies the RF signal that circulates through the IF load, center tap of the LO secondary, both on diodes (D3 & D4), and back to the lower end of the RF secondary. Go ahead and take some colored pencils and trace the two paths, it’s a neat circuit.

So as the LO signal changes the polarity of the secondary voltage, the net effect is that the RF signal is switching (or commutating) between the two halves of the RF secondary. Since the IF load resistor is connected to the RF transformer secondary center tap, the result is that the RF signal appearing on the IF load is switching its phase 180 degrees at the rate of the LO frequency but its amplitude is determined by the RF signal amplitude (the LO signal balances out at the IF port also). This multiplying of the RF signal by the LO signal is what achieves the mixing function in the DBM, a different phenomenon than the square law mixing that occurs in FET or transistor mixers.

A typical Doubly Balanced Mixer will have a conversion loss of 7 dB, port to port isolation of 50 dB, require at least 5 milliwatts of LO drive and can operate from 5 to 500 MHz.

Bill K3ZMA