

Web Site k3dn.org

Warminster Amateur Radio Club

May 2014

Next Meeting May 1, 2014 – Elections and Ham Fest

President's Message

As I write this Message, I realize that it will be my last Presidents' Message in the Feedback. Following our election during the May meeting, I will step aside to the role of Past President and the new President will take over. Looking back on my roles within WARC; I served as Hamfest Chairperson for two years back in the 90's, Director, Vice President and President for these past two years. I have enjoyed working with all of those who have served with me on the Board of Directors. Our membership is diverse and we offer so much help to each other and serve a vital role in our community. It has been, and will continue to be both fun and rewarding. Ham Radio has brought a wealth of knowledge and diversity allowing me to meet so many people around the world.



April and May are very active months for WARC. By the time you read this, we will have participated in the March for Babies and the Valley Forge Revolutionary Run (both on April 27th) and Del-Val College A- Day (April 25th to 27th). In May

we have our Hamfest on Sunday, May 4th and BucksJam14 - Boy Scout Jamboree on Saturday May 17th. The Boy Scouts have offered us an opportunity to demonstrate Amateur Radio at the local Jamboree on May 17th. It's being held at the Wrightstown Grange Fair Grounds. The club will conduct this as a Special Event Station, similar to the one we ran at the Union League a few years ago. The announcement has already been submitted to the ARRL for publication in QST. Vinnie, K3VJP, is taking the lead here and will be looking for volunteers. He hopes to run a number of stations one on SSB and the others on Digital and perhaps D -Star.

At the May meeting we will elect our new club officers. We will also finalize our plans for the Hamfest which is schedule for Sunday, May 4th.

The club station will open 1 $^{1/2}$ hours before our club meeting (6 pm to 7:30 pm). It's a great opportunity to get on the air. If successful, we will continue to open the station before our meetings. So, if you have a license and no home station...no more excuses to getting on the air!

During our April Club Meeting we approved changes to our constitution, one of which reads as following: "Nothing is this document is meant to preclude the use of electronic means to conduct the business of the corporation when those means are devised and approved by the Executive Board meeting in regular Executive session and also approved by a simple majority vote of Regular members in good standing attending a subsequent general meeting". Although we do not have time to implement for this upcoming election, hopefully, we will can implement next year.

Please remember, you must be a paid up member to vote for both the election of new officers.

Have fun and get on the Air!

Irwin, KD3TB

(Continued from page 1)

I am looking for volunteers to help on-site and for Call-ins to help make this a very special Day for the Scouts and Warminster Amateur Radio Club.

Also I am creating a backdrop for the tables and I am looking for Digital Pictures of WARC in action to place on it. If you have one or two pictures showing the Club in action at an event, please forward it to

me.

Contact Vinny Porcaro k3vjp@arrl.net or vinnyp5@verizon.net Thank you

The announcement below has been placed in QST.

Warminster Amateur Radio Station Special Event Station Announcement BucksJam14 Saturday May 17th, 15:00 UTC to 23:00 UTC

K3DN, 15:00Z to 23:00Z May 17th, the Warminster Amateur Radio Club of Warminster, PA is proud to host a special event station at the BucksJam14. BucksJam14 is the Premier Scouting Event in Bucks County, PA. for 2014. This will be a gathering of CUB PACKS, SCOUT TROOPS, and VENTURING CREWS AND EXPLORER POSTS. Let's help make this a very special day for everyone. Look for us on 14.280 and 21.280 for SSB and 14.070 for PSK31. Further information and operating bands/modes can be found on www.k3dn.org. A certificate of contact can be obtained by sending a Self Addressed Stamped Letter Size Envelope along with \$1 US to K3DN, Warminster Amateur Radio Club, PO Box 113, Warminster, PA 18974. Foreign station must include the correct amount of postage.

	Election of WARC Officers:
Candidates	for the 2014 Election
President:	Rich Luce, AG3L
Vice Preside	nt: Vinny Porcraro, K3VJP
Secretary :	Alan Ash, KA3YCG
	Tony Cuttone, W3FLH
	(Elect 1)
Treasurer:	Bill Ballantine, K3FMQ
Director:	Joe Horanzy, AA3JH
	Andy Vavra, KD3RF
	Jim Elmore , WA4YWM
	(Elect 2)

Warminster Amateur Radio Club meeting minutes – April 3, 2014

- Meeting called to order at 7:30
- Round of Introductions

Visitors - Jim, who wants to get his license, and Don, who wants to get on HF

- Minutes from last meeting approved
- Treasurers report As given by Irwin in place of Bill
- Voting tonight
- Programs tonight Pete Putnam, KT2B Updates in HD Technology
- May Hamfest prep and elections

June – Field Day prep.

Boy Scouts are upstairs with WW3Y working on Merit Badges Irwin noted a solar flair occurred on Saturday.

- Membership K3ZMA 82 paid members, 53 not paid –Total of 135
- Bill noted that Ballots consist of minor changes to Constitution. Must be a paid up member in good standing.
 - Public Service N3HBT March for Babies, formerly March of Dmes
 - April 27, Tyler State Park 8:30 am -noon, 12 operators needed, Sign up sheet circulated.

Michael – KB1JEY Revolutionary Run – Valley Forge Park

Same day as March of Dimes - April 27

- VE Session On Monday past. Total of 9 candidates., 2 upgrades, 7 new hams
- Repeater N3 HBT notes that echolink is up and running.
- Good and Welfare KD3TC Nothing new
- Constitutional Updates Use of electronic voting no questions
- Election of New officers. Irwin will not be running for President, rundown of candidates, No additional nominations.
- Club Station New computer is installed
- BucksJam14 –K3VJP, Vinny May 17 Event to get scouts on the air, sign-up sheet circulated. Correction noted by K3Z-MA, as Bucks and Mercer (NJ) counties merged operation.
- A-Day at Delaware Valley College April 25 27, effort to publicise Amateur Radio, Chuck, a student at DVC is coordinating with the college. KD3DI, K3ZMA commented on parking.
- Hamfest WA3QVU . K3NXX Dan is handling advertising –opportunities to pass out fliers
- Club Equipment An MFJ analyzer is missing. Inquiry of who has it.
- ARRL Centennial Hartford, CT Rooms available at Marriot July 18-20 Inquiry by KD3TB of who is interested in going.
- AA3K Mark. WRTC2014 contest July 12-13 .Plymouth MA 59 teams take part. Mark interested in finding out who would like to go with him.
- K3ZMA noted that 33 is number necessary for a vote to take place. (number Achieved)

Motion to adjourn – Done

Submitted KA3YCG

AMATEUR RADIO-DEVELOPED SOFTWARE ASSISTING IN SEARCH FOR MISSING AIRLINER

US Navy personnel helping to look for missing Malaysia Air Flight MH370 have used the signal-processing and analysis package Spectrum Laboratory by Wolf Buescher, DL4YHF, to analyze recently detected 37.5 kHz "pings" that may be from the missing plane's "black box." Some Spectrum Laboratory screen shots as seen aboard the Australian defense vessel Ocean Shield were shown on TV in Australia and in the UK. The US Navy personnel are guests aboard the Australian ship. VLF experimenter Warren Ziegler, K2ORS, said the software is the same package Amateur Radio experimenters used recently to detect transatlantic signals http://www.arrl.org/news/hams-experimental-vlf-signals-heard-in-the-uk-europe on 29 kHz.

"Wolf's package is first-rate software, and I know that there have been other professional uses, but this was quite an interesting one!" Ziegler said.

Page 4

(Continued from page 3)

The software began as a simple DOS-based FFT program, but it is now a specialized audio analyzer, filter, frequency converter, hum filter, data logger, and more. It's available for download http://www.qsl.net/dl4yhf/spectral.html#download from DL4YHF's Amateur Radio Software site.

Buescher said he was skeptical about the initial "ping" detection by a Chinese search vessel, but later called the spectrogram taken by the US team aboard Ocean Shield "convincing." He said a screenshot from Australian TV clearly shows the "bip-bip-bip" ultrasonic bursts or pings, "just as they should look," he said, rather than a "just a wobbly carrier that comes and goes."

"In slow-CW terms, it would be an 'outstanding signal." Buescher said. "Now keeping fingers crossed that the ["black box"] batteries last a bit longer than specified. The experts say the pinger's battery usually degrades slowly, instead of going QRT abruptly."

At mid-week, searchers had detected additional, more promising pings that appeared to conform to the pattern of those expected from an aircraft black box.

Courtesy of the ARRL Newsletter

THE K7RA SOLAR UPDATE

Tad Cook, K7RA, Seattle, Washington, reports: Average daily sunspot numbers during the past week rose 84.3 points, from 118.4 to 202.7. Average daily solar flux was up 11.3 points to 160.4.

The predicted average solar flux on April 19 for April 24-27 was 150, but this has been downgraded. On April 23 the average for the same period was adjusted down to 122.5.

The latest projection has solar flux at 125 on April 24-26, 115 on April 27 through May 1, 155 on May 2-4, 160, 165, 160, 155, and 150 on May 5-9, 155 on May 10-14, 150 on May 15-17, and 165 on May 18.

Predicted planetary A index is 8 on April 24-25, 5 on April 26 through May 13, followed by 10, 8, 15, 25, 20, and 10 on May 14-19, and 8 on May 20-22.

Petr Kolman, OK1MGW, of the Czech Propagation Interest Group on April 20 predicted geomagnetic conditions to be quiet to unsettled on April 24-25, mostly quiet on April 26-28, quiet on April 29, mostly quiet on April 30, quiet on May 1-2, mostly quiet on May 3, quiet to unsettled on May 6-7, quiet to active on May 8-9, quiet to unsettled on May 10-11, mostly quiet on May 12-13, quiet to unsettled on May 14-15, and mostly quiet on May 16.

This weekly "Solar Update" in The ARRL Letter is a preview of the "Propagation Bulletin" issued each Friday. The latest bulletin and an archive http://arrl.org/w1aw-bulletins-archive-propagation of past propagation bulletins is on the ARRL website.

Courtesy of the ARRL Newsletter

NOBEL PRIZE WINNER JOE TAYLOR, K1JT, HELPS REOPEN DUTCH RADIO TELESCOPE

Nobel Laureate Joe Taylor, K1JT, was the guest of honor April 5, pushing the ceremonial button to reopen the restored 25 meter Dwingeloo Radio Telescope in the Netherlands. The dish will see some Amateur Radio use on 23 centimeters. The CAMRAS http://www.camras.nl/ Foundation manages the Dwingeloo Radio Telescope, which had remained largely idle since 1997. Its owner is the Dutch Institute for Radio Astronomy (ASTRON). Queen Juliana and Jan Oort , founder of radio astronomy in the Netherlands, were present at the telescope's inauguration on April 17, 1956.

For about 60 youngsters of various ages the re-opening festivities featured activities on astronomy and modern technology, including a discussion with the children about science and technology. With the renovation complete the radiotelescope will be used by Amateur Radio, amateur astronomers, and by and for budding researchers. Peter Jelgersma, PA8A, has told ARRL that the giant dish will be put to use on 1296 MHz and perhaps elsewhere. The Dwingeloo Radiotelescope for several years has been used by Dutch radio amateurs for EME work, including during the ARRL EME Contest.

Joe Taylor will speak at the ARRL National Centennial Convention in Hartford, Connecticut on Saturday, July 19.

Courtesy of the ARRL Newsletter

TECHNOLOGY: HAARP-LIKE IONOSPHERIC RESEARCH PROJECT UNDERWAY AT ARECIBO OBSERVATORY

Work is underway to complete the construction of an ionospheric research facility at the Arecibo Observatory http://www.naic.edu/ in Puerto Rico that bears some similarities to the High Frequency Active Auroral Research Program (HAARP) far to the north in Alaska, but on a different scale and with different research goals.

"It is basically the same as HAARP for the science, except that HAARP was in the Auroral Region, where the physics of the ionosphere is quite different with all the energetic particles and magnetic fields," Penn State Electrical Engineering Professor Jim Breakall, WA3FET, told ARRL. "HAARP also had 3 gigawatts of effective radiated power, where Arecibo will only be about 200 megawatts." The Arecibo Observatory Amateur Radio Club, KP4AO, is headquartered at the research facility, which celebrated its 50th anniversary last fall.

The National Science Foundation and Cornell University, which previously operated Arecibo Observatory, contracted with Penn State's Electrical Engineering Department to construct the "new and enhanced" HF ionospheric instrument. It will be used to study the interaction between HF radio energy and ionospheric plasma.

The new facility will replace an earlier ionospheric heater in Islote, Puerto Rico, that was destroyed by Hurricane Georges in 1998. Rather than rebuild that installation, the new instrument will use the observatory's 1000 foot dish for its antenna. This will keep all research activities involving ionospheric modification at the observatory proper. Plans call for a design based on a Cassegrain-screen concept of phased array at the bottom of the dish feeding a sub-reflector mesh that hangs above the dish from three support towers. Breakall and his team of graduate students at Penn State have done all of the electrical design and modeling of this new antenna system.

"There are three crossed-dipoles for 5.1 MHz and another three for 8.175 MHz, forming an array that will beam energy up to a net mesh reflector that will hang from the three big towers," Breakall explained. "This Cassegrain screen will then reflect energy back down to the 1000 foot dish and beam an effective radiated power of hundreds of megawatts up to the ionosphere to modify it." Each dipole is fed from a 100 kW transmitter, yielding a total transmitted power of 600 kW.

An even earlier HF ionosphere-heating antenna system also was suspended from the platform above the dish and driven by a single 100 kW transmitter over a frequency range of 3 to 10 MHz. That design suffered from arcing problems and was taken out of service in the 1970s.

Scale aside, Breakall said, while HAARP also tried to modulate the ionosphere's naturally flowing currents to create VLF and ELF for submarine communication, Arecibo "has much weaker currents, and that probably will not work," he said. On the other hand, he said, "Arecibo has a big advantage over HAARP in that the same 1000 foot dish can be used for diagnostics with the 430 MHz incoherent scatter radar that can measure things such as temperature, density, winds, etc, as they are modified. HAARP has nothing like this."

Breakall said he does not anticipate that the new Arecibo ionospheric research facility will attract the same degree of controversy that HAARP has over its history, but he conceded that it's possible.

"All of the conspiracy stuff about HAARP really is not true, and I am sure Arecibo could get some of the same conspiracy [talk], and I think some of it maybe has started already," he said.

Courtesy of the ARRL Newsletter

Membership Information

The following listing contains the callsigns of WARC members who are currently late in paying their 2014 dues according to our membership database. Payments can be made on-line at k3dn.org, by mail to the WARC, PO Box 113, Waminster PA 18974; or in person at the next WARC meeting. Regular membership dues are \$20 and Alumni or Family dues are \$10 per year. If you think the listing is in error please email membership@k3dn.org and let us know.

Thanks,

73

Bill K3ZMA and Michelle KB3MTW, Membership Committee

REGULAR MEMBERS

ALUMNI/FAMILY MEMBERS

KC3	ACQ
K2	AKW
KB3	ALX
KA3	BBU
KE3	BI
W9	BIK
KB3	DHU
K3	EBZ
N3	FKR
KB3	FNY
К3	FWN
W3	GAD
KB3	HWR
К3	IIE
KB3	JRB
К3	JSR
К3	MFI
KB3	MTU

KB3	MUZ
KB3	NNB
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KA3	OXZ
N3	OZO
KB3	PCX
KD3	QL
KD3	RA
WB3	U
KB3	VYX
KB3	WLO
K3	WSX
W2	YJB
N3	YNH
AB3	YZ
KB3	ZAK
N3	ZAP
K3	ZMW

KB3	TIF
W3	EPU
K3	FT
N3	IAN
KB3	ODJ
K2	QBU
W3	UEC

CLUB INFO

PUBLIC SERVICE

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

An Alumni membership category is available for WARC members who are unable to attend meetings and club activities on a regular basis because of health considerations, travel impediments, or other hardships. Dues for the Alumni membership are \$10.00 annually. Please contact the Membership Committee for more information if interested."

ATTENTION MEMBERS

The Membership Committee can provide Club badges. Two types are available: an engraved plastic callsign and name badge for \$5 or a free, laminated plastic, photo ID badge/card. The photo id badge is included with your membership when a facial photo is provided by you. Please see members' photos on club website for proper facial composition. If you do not have at least a Warminster Amateur Radio Club badge with your picture on it, please contact your Membership Chairs at the WARC monthly meetings. Otherwise, please contact Membership by email at: membership@k3dn.org.

If you want to have your picture taken to be placed on the 'Members' Photos' section of the www.k3dn.org website, please contact Membership with your interest. When we get enough people who are interested we will post a notice in Feedback and have a camera ready at the following club meeting.

PROGRAMS 2014

May 1 - Elections and Ham Fest

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, Del-



mont Avenue, Warminster, PA. Talk in is available on the 147.09 & 443.950 repeaters.

2014 Contest Calendar

JUNE

14-16 June VHF 1800 UTC Saturday through 0259 UTC Monday

21 Kids Day 1800 UTC through 2359 UTC

28-29 Field Day 1800 UTC Saturday through 2059 UTC Sunday

JULY

12-13 IARU HF World Championship 1200 UTC Saturday and ending 1200 UTC Sunday

AUGUST

2 - 3 August UHF 1800 UTC Saturday through 1800 UTC Sunday 16-17 10 GHz and Up 6:00 AM local Saturday through 12:00 midnight local Sunday

17 Rookie Roundup - RTTY 1800 UTC through 2359 UTC

QSO Parties

Indiana 1600Z, May 3 to 0400Z, May 4 New England 2000Z, May 3 to 2400Z, May 4 7th Call Area QSO Party 1300Z, May 3 to 0700Z, May 4

> ATLANTIC DIV. HAMFESTS - 2014

May 3 - Greater Hagerstown Area Hamfest Washington County Agricultural Center

7313 Sharpsburg Pike Boonesboro, MD http://w3cwc.org

May 4 - Warminster ARC Hamfest Middletown Grange Fairgrounds 576 Penns Park Road Wrightstown, PA http://k3dn.org/hamfest.htm

May 18 - JSARS "Hamfest by the Shore" Riverwood Park Riverwood Drive Toms River, NJ 08753 http://jsars.org

May 25 - Memorial Day Hamfest Howard County Fairgrounds 2210 Fairgrounds Road West Friendship, MD 21794 http://www.marylandfm.org

June 14 - Bloomsburg Hamfest Lime Ridge Community Center 6405 4th Street Lime Ridge, PA http://www.qsl.net/cm-arc/

June 27 - RadioActivity 2014 Holiday Inn Timonium 9615 Deereco Road Timonium, MD http://www.maarc.org

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 2014 test fee is \$15.00.

Warminster Amateur Radio Club, Monthly, Last Mon. 7:00 pm at the Wilson Senior Community Center 580 Delmont Avenue Warminster, PA 18974 George Brechmann (215) 443-5656. Atco, NJ, The fourth (4th) Tuesday of each month, at 7 p.m. Winslow Township Senior Center, 33 Cooper Folly Road, 08004-2603.

Mark (K2AX) jtra@comcast.net Levittown, PA, Monthly, 3rd Monday at 6:30. Falls Township Building - Ben Johns, K3JQH, 215-657-5994 Telford, PA, Monthly, RF Hill ARC. 3rd Monday at the Indian Valley Library. Charles Schmell, KB3CEZ, 215-257-6368 days 215-538-7458 evenings.

Philadelphia, PA, Testing is done on the 4th, non holiday Thursday of the month at the, Community Ambulance Association of Ambler, 1414 E Butler Pike, Ambler PA 19002 at 7:00 PM We also are testing on Saturdays at least once per quarter at 9:00 AM. For further information contact James McCloskey at jmccloskey@msn.com and by phone 215 -275-2979.

Lansdale, PA Testing on the first nonholiday Tuesday of the month starting at 7:00 PM. The Lansdale Library Community Room Vine St. and Susquehanna Ave. Lansdale, Pa.Registration is required 48 hrs. or more before the scheduled exam date. If there are no registrations the scheduled exam date will be canceled. NO WALK-INS. You can register by contacting:

Olaf N. Markert ------ Phone (610) 517-5074, E-mail w3pa@arrl.net

SKYWARN INFORMATION

MOUNT HOLLY NWSFO SKYWARN Weekly Information Net: EVERY THURSDAY AT 21:00 HOURS

SKYWARN Net Repeater Listing/ Streaming Audio of scheduled SKYWARN Net: http://www.skywarnnet.net

You do NOT have to be a certified SKYWARN Weather Spotter to check into the Net

Bucks County SKYWARN Weather Spotter PRIMARY FREQUENCY: 147.300MHZ (+ 131.8)

Fairless Hills, PA (many remote access locations throughout Bucks County)

Mount Holly NWSFO SKYWARN Homepage:

http://www.erh.noaa.gov/phi/skywarn/index.html

SKYWARN Basic Weather Spotter Educational Programs URL: http://www.erh.noaa.gov/phi/skywarn/training.html#sched



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 station.

For further information contact George Brechmann, N3HBT at 215-443-5656.

Bucks County Amateur Radio Emergency Service (BCARES)

www.bucksares.orgBucks County ARES will be on the air Wednesdays, at 9:00 PM . We will be using Warmin-
ster Amateur Radio Club's repeater on 147.090, pl 131.8. This net is linked as shown in the
Net Schedule box for the Wednesday night net. It may also be linked to 147.300.
Winlink Gateway Stations:
Upper BucksUpper BucksNJ3A-10145.610 Riegelsville
Lower BucksNY3J-10145.530 Bensalem
MontcoW3CF-10 145.950 Hatfield

Chester County W3EOC-10 145.690

Net Schedules

- Sunday Wednesday Wednesday Rptr.Wednesday Sunday Thursday
- 2100 2030 2030 2030 2030 2030 1900
- 10 Meter Net 2 Meter Net Linked w/ 2 Meter Net Linked w/ 2 Meter Net Informal Net Mont. Cnty RACES Net
- 28.445 MHz 147.09 Rptr. 443.95 53.230 Rptr. 223.5 Simplex 146.835 Rptr.

CLUB EQUIPMENT

WARC has purchased four Vertex Standard 2-meter HT's that are available for use by members of the club. The HT's are available on a month-by-month basis and have been purchased primarily to help new hams get on the air. However, they may also be used by any club member who is in need of a temporary 2-meter radio. They are also available for use by participants in WARC's public service activities. DE, Irwin Darack KD3TB 215 -343-8170

Ar	ea Repeaters
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	VHF
145.310	R.F. Hill
145.350	Doylestown R.C.
146.790	Penn Wireless
145.330	Hilltown
146.670	
146.685	
146.925	Willingboro
147.000	0
147.030	
147.090	
147.270	
147.300	
147.390	CBRA
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Page 10

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2013 Officers

Executive Officers

President Vice-President Secretary Treasurer Director (A) Director (E) Director (A) Director (A) Past President

Archives

Classes

Arrl Liason

DXpedition

Field Day 14

Fundraising

Hamfest 14

Holiday Dinner

Membership

Membership

Net Manager

Publicity

PA QSO Party

Refreshments

Refreshments

RF Interference

RF Interference

Safety Officer

Sunshine Club

Township Liason

VHF/UHF/MW

Youth Programs

VE License Testing

Website Coordinator

Skywarn Liason Station Trustee

Repeater Coordinator

Hamwear

Awards Manager

Digital and APRS

Feedback Editor

Committee Chairpersons

Irwin Darack
Richard Luce
Alan Ash
Bill Ballantine
George Brechmann
Mark Kempisty
Al Konschak
Brian Taylor
Larry Abbott

KD3TB 215-343-8170 AG3L 215-441-8264 KA3YCG 215-357-9286 K3FMO 215-766-0764 N3HBT 215-443-5656 AA3K 215-953-1493 215-491-9941 WI3Z N3EXA 215-257-6303 215-704-3282 WA3ELQ

ARES/RACES Liason Karl Harris K3KH 215-264-1855 **Richard Luce** AG3L 215-441-8264 Vince Pironti KD3TC 215-674-0446 George Altemus KA3WXV 215-855-3856 Ron Wenig 215-638-9257 NY3J Doc Whitticar W3GAD 215-968-6397 Jim Elmore WA4YWM 215-538-1889 Mark Kempisty AA3K 215-953-1493 Adam Huffnagle **KB3JCP** 215-442-9526 **Richard Luce** AG3L 215-441-8264 Alan Berkheiser **KB3VYX** George Brechmann N3HBT 215-443-5656 Michelle London KB3MTW 215-672-7578 Bill Strunk 215-822-0749 K3ZMA George Brechmann N3HBT 215-443-5656 Mark Kempisty AA3K 215-953-1493 Bernice Kraut **KB3PCX** 215-884-8195 215-542-0593 Doc Morein KA3RAU Randy Gehman N3LJE 215-822-9473 Andy Vavra KD3RF 610-287-3295 **Bill Ballantine** 215-766-0764 K3FMQ Brian Taylor N3EXA 215-257-6303 Vinny Porcaro K3VJP 215-493-0783 George Brechmann N3HBT 215-443-5656 Vince Pironti KD3TC 215-674-0446 **Richard Luce** AG3L 215-441-8264 Larry Abbott WA3ELQ 215-704-3282 George Altemus KA3WXV 215-855-3856 Al Konschak WI3Z 215-491-9941 Steve Larson WW3Y 215-822-1511

FEEDBACK