



THE PROPAGATOR

8 Donner St.
Holmdel, NJ 07733
Editor: Bob Buus, W2OD

JUNE 2010

UPCOMING GSARA MEETINGS

The next regular meeting of the GSARA will be held on **Wednesday, June 2 at 7:30 PM** at the **American Red Cross - Regional Office**, 1540 West Park Avenue, Tinton Falls, New Jersey. For all meetings, guests are welcome and refreshments will be served. Please try to attend.

The second meeting in June, also at the Red Cross, will be on **Wednesday, June 16 at 7:30 PM** and will be devoted to how we are going to operate on Field Day. We will simulate making and logging Field Day QSOs so that you can become familiar with the procedures used. Whether you are a newcomer or old timer, you will find this meeting interesting and educational. As always, refreshments will be served. We look forward to seeing you there.

ANTENNA BUILDING PARTY MAY 19

A total of 12 GSARA members built tape measure yagi antennas for 2-meters at the May 19 meeting and all checked out OK electrically. This is an unusually rugged antenna that works very well. We now have a core set of members with portable directional antennas that would be useful for finding hidden transmitters. Now that we have the antennas, we should pursue good uses for them. Perhaps a fox (hidden transmitter) hunt can be arranged later this summer or fall.

GSARA HOMEPAGE

<http://www.gardenstateara.org>

Have you checked it out recently?

HUDSON DIVISION HOME PAGE

<http://www.hudson.arrl.org>

CQ FIELD DAY

This year, Field Day is June 26-27. The official 2010 ARRL Field Day Web page is up and running at <http://www.arrl.org/FieldDay>. This page includes a summary of available resources, with links to Field Day forms and rules, logos and reference links. The page also includes a quick link to the map-based Field Day Station Locator where users can search for public Field Day sites. The Field Day page also includes a link for ordering commemorative Field Day T-shirts, hats, pins and other supplies.

ARRL Field Day is the single most popular on-the-air event held annually in the US and Canada. Each year over 35,000 amateurs gather with their clubs, friends or simply by themselves to operate.

ARRL Field Day is not a fully adjudicated contest, which explains much of its popularity. It is a time where many aspects of Amateur Radio come together to highlight our many roles. While some will treat it as a contest, most groups use the opportunity to practice their emergency response capabilities. It is an excellent opportunity to demonstrate Amateur Radio to local elected community leaders, key individuals with the organizations that Amateur Radio might serve in an emergency, as well as the general public. For many clubs, ARRL Field Day is one of the highlights of their annual calendar.

For the last time, GSARA will set up for Field Day at the Baseball fields at Fort Monmouth. Set-up will start on Friday afternoon, June 25 and continue on Saturday morning. Operation starts at 2 PM Saturday and runs for 24 hours. Please plan to participate at least some of the time. Of course, help is always appreciated in setting up and tearing down. Also, plan to attend the June 16 meeting to learn operating and logging procedures. With YOU participating, Field Day will be both fun and successful.

GSARA OFFICERS

| | | | |
|------------|--------|------------------|----------|
| President | W2XYZ | Frank Wroblewski | 942-7705 |
| Vice Pres. | W2HTS | Howard Suffill | 460-1885 |
| Secretary | W2OD | Bob Buus | 946-8615 |
| Treasurer | W2KQ | Joe Dreifuss | 493-4236 |
| Engineer | N2LXM | Jeff Harshman | 922-0816 |
| Webmaster | KC2TKK | Josh Gluck | |
| Publicity | NJ2H | Bill Shockley | 207-4466 |
| Trustees | KG2NV | Don Pingitore | 229-2925 |
| | W2OD | Bob Buus | 946-8615 |
| | WA2FVL | Jack Keating | 264-7670 |

PROPAGATOR AVAILABLE BY E-MAIL

Would you like to help the finances of GSARA and at the same time get your issue of *The Propagator* a few days earlier? You can get every issue e-mailed to your computer every month by simply giving your e-mail address to Josh Gluck, KC2TKK and request *The Propagator* electronically. Josh's e-mail address is <kc2tkk@gardenatateara.org>.

BADGES AND PATCHES

If you would like a GSARA name badge, you may order one by getting a Badge Order Form from our Secretary, **Bob Buus, W2OD**, filling it out and turning it in to Bob with your \$7.00 payment.

We also now have patches available at all meetings and they cost \$3.

OUTGOING QSL CARDS

If any GSARA members wish to combine their QSL cards that are going through the outgoing ARRL Bureau, please bring them to the next GSARA meeting along with the label from a recent QST Magazine (you must be an ARRL member to participate in this program). We then send them as a group at no charge to GSARA members. It couldn't be much easier than that to QSL. You are registered at the W2 incoming bureau, aren't you?

PROPAGATOR NOW ON THE WEB

The *Propagator* is available as a PDF file at:

<http://www.gardenstateara.org>

Click on "The Propagator" and then select the month you want.

EDITOR'S NOTES

You will note that this issue of *The Propagator* is a bit smaller than usual (only 8 pages instead of 10) and is a bit later than usual in getting distributed. The reason is that I have had a house full of out-of-town guests and haven't been able to devote the normal amount of time to produce this document. Hopefully, things will be back to normal for next month.

The antenna building party on May 19 worked out very well and was a lot of fun. No one encountered any serious problems in building the antenna. Next, we will have to find creative ways to put the antennas to use. Hopefully, we can have a fox hunt sometime in the future.

Field Day is the next big activity for GSARA and I hope that you plan to participate in some way. This is our last year at Fort Monmouth and I hope we can go out with a lot of activity. Come to the June 16 meeting to learn more and reserve some time during the weekend of June 26-27 to participate. I look forward to seeing you there.

If you haven't already done so, take a peek at the new ARRL web site (see article on p. 5) Although there may still be a few problems with the site, it seems pretty good to me and the folks at Newington are working to fix any remaining problems. Also, it is to be noted that the Audio News is now back after a 4-month absence.

All indications are that the Dayton Hamvention had more attendees this year than in the past few. Let's hope that it is a sign of more improvement to come.

If you are interested in obtaining a gardenstateara.org email address which will give you webmail and POP3/SMTP access, please send an email to Josh at kc2tkk@gardenstateara.org with your First Name, Last Name, and Call Sign. Your email address call_sign@gardenstateara.org will be created and the login information sent back to the email address your request came from.

Remember if you change your e-mail address; please be sure to inform Josh Gluck, KC2TKK.

As always, I appreciate feedback or material for *The Propagator*. The deadline for the July issue is June 15.

73 de Bob, w2od@arrrl.net

.MINUTES OF MAY 5 MEETING

By Bob Buus, W2OD, Secretary

President Frank Wroblewski, W2XYZ called the meeting to order at the Red Cross at 7:30 PM. There were 11 members and one guest present. The guest was Bill Pointon, WA2CG from Atlantic Highlands. After the pledge to the flag, all members introduced themselves.

Secretary's Report

A motion was made by Jeff, N2LXM and seconded by Lou, W2HAM to accept the minutes of the April meeting as published in the May Propagator. The motion was accepted unanimously.

Correspondence

Insurance policies were received by Secretary Bob, W2OD for both liability and equipment insurance and will be kept in his keeping.

A list of ham radio equipment for sale was received from Barney Ristoro, K2BWO and circulated among the members present.

Treasurer's Report

Treasurer Joe Dreifuss, W2KQ gave his report. A motion was made by Jeff, N2LXM and seconded by Mike, KC2Q to accept the report. The motion was accepted unanimously.

Public Service

Due to a conflict, Tom, N2VFK cannot serve as Director for the MS 170 communications on May 22 and 23 and is looking for someone to take this role. If you can help, contact Tom.

New Member

An application for membership was received in February but buried in the Special Event QSL requests until now. It is from Ghislaine (Gia) Martin, KC2WLT from Valatie, NY but who has a summer home in Sea Girt, NJ. Gia is a recently licensed Technician and has two sons also interested in amateur radio so a Family membership was requested. A motion was made and seconded to accept Gia and his sons as Family members of GSARA. The motion passed unanimously.

Old Business

A sign-up sheet was circulated to solicit interest in building the tape measure yagi 2-meter antenna at the next meeting. So far, only two had signed up on-line.

Joe, W2KQ reported that the White Elephant sale on April 21 was a success with over \$400 net profit. Thanks to all who contributed junque, to all who helped set up and take down, and to all who participated.

New Business

The Red Cross has asked us to run a one-day amateur radio class on Saturday, May 22. Hopefully, Jeff, N2LXM will be available to run this class but he has to check his calendar.

Announcements

The June 16th meeting will be the last before Field Day. We are planning on having practice sessions for logging and working phone to encourage new comers to our Field Day on June 22 and 23.

The NJDXA Hamfest is on Sunday, May 23 at the MAECOM building in Tinton Falls.

Closing

The door prize of \$11.50 was won by Joe, W2KQ. There being no further business, a motion was made by Jeff, N2LXM and seconded by Martin, N2BMK to close the meeting. The motion was accepted unanimously and the meeting adjourned at 7:50 PM.

Most members stayed after the adjournment to help Jeff, N2LXM with filling out the K2USA Special Event certificates for the many who requested them.

MAY 19 MEETING

There was no formal meeting of the GSARA since it was superseded by the building of tape measure yagi antennas for two meters. There were 14 members and two guests present. The guests were Russ Prelipp, KC2PFQ and Phil O'Donnell, W2LNB. After a pledge to the flag and everyone introducing themselves, there were three announcements made:

The one-day class scheduled for May 22 was canceled due to lack of interest.

Tom, N2VFK needs more help with the MS-170 on May 22 and 23.

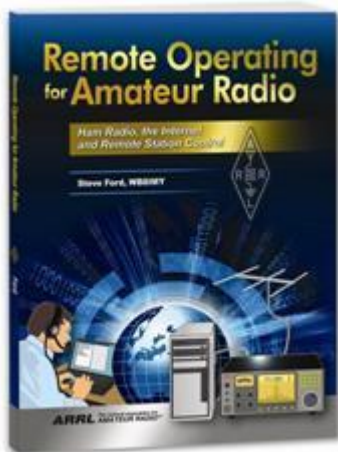
The NADXA is having a Hamfest on Sunday, May 23.

A total of 12 antennas were constructed and tested at the meeting.

TWO NEW BOOKS FROM ARRL

Two new books -- Remote Operating for Amateur Radio and the third edition of The ARRL RFI Book -- were introduced by the ARRL at the Dayton Hamvention.

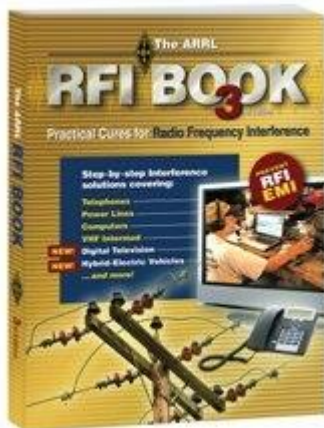
Remote Operating for Amateur Radio shows amateurs how to assemble their own Internet-controlled stations. As many hams are discovering, it has become increasingly difficult to enjoy Amateur Radio at home. Some have been driven off the air altogether by antenna restrictions, local interference and other limiting factors. But the widespread availability of high-speed Internet offers a powerful solution:



Amateurs can now setup a complete station at a remote location and operate via the Internet, just as though they are actually sitting in front of the radio.

ARRL's team of experts has compiled the best

advice available on every type of radio frequency interference (RFI) in this brand new edition of The ARRL RFI Book. From automotive to television, from computers to DVD players, from audio equipment to telephones, readers will find a step-by-step process for



eliminating problematic interference in one convenient book. The third edition of The ARRL RFI Book also includes resources for addressing new realities of digital cable TV and satellite systems, over-the-air TV signals, as well as hybrid and all-electric automobiles. For more information on these two new exciting publications, including how to get your own copy, click [here](#).

From *The ARRL Letter*, May 27, 2010

SPECIAL SOUTH AFRICA PREFIX



Hams who will be attending the FIFA World Cup in South Africa this summer will be able to attach a special prefix to their call signs.

Through an agreement between the South African Radio League ([SARL](#)) and the Independent Communications Authority of South Africa, those radio amateurs who will be attending the [FIFA World Cup](#) in South Africa may use a [special ZS call sign](#) during the event. SARL is South Africa's IARU Member-Society. After registering with SARL prior to arrival in South Africa, hams may attach ZS10 to the front of their own call sign (i.e. ZS10/K1SFA) from June 11-July 11. Hams interested in obtaining permission to use ZS10/ must complete the form and [e-mail it to SARL](#), along with a copy of their passport page showing the ham's photograph and a copy of their current Amateur Radio license. Hams will need to keep both a copy of the form and their license while in South Africa. In anticipation of the World Cup, SARL and its affiliated clubs have been using a special event call sign -- ZS10WCS -- since September 2009. SARL will provide a commemorative QSL card for those amateurs who work ZS10WCS. Direct QSLs must include a self-addressed envelope and one IRC or US \$1. International Amateurs may also [QSL via e-mail](#), but those hams sending an e-mail QSL will only receive an e-mail QSL in return, and not the commemorative printed QSL card.

From *The ARRL Letter*, May 27, 2010

CHANGES PROPOSED FOR 60 METERS

Acting on a 2006 Petition for Rulemaking filed by the ARRL, the FCC has issued a Notice of Proposed Rule Making (NPRM), ET Docket No 10-98 to modify the rules that govern amateurs' secondary use of five channels in the 5 MHz frequency range known as 60 meters. The proposed changes would substitute a new channel for one that is seldom available because of occupancy by the fixed service, which is primary in this range. Also proposed is an increase in power from 50 to 100 W effective radiated power (ERP) and the addition of CW, PSK31 and PACTOR-III modes with provisions to ensure that such operations would be compatible with the primary service. The specific proposed changes are:

- One of the available channels, 5368 kHz, be replaced with 5358.5 kHz. The other four channels remain at 5332 kHz, 5348 kHz, 5373 kHz and 5405 kHz.
- Three additional emission designators -- 150HA1A (CW), 60HOJ2B (PSK31) and 2K80J2D (Pactor III) -- be authorized in the 60 meter band, provided that the operators using these modes utilize great care to limit the length of transmissions so as to avoid interference with Federal operations.
- The maximum ERP on channels in the 60 meter band be increased from 50 to 100 W PEP, provided that amateurs utilize Voice-Operated Transmit (VOX) while in the single sideband emission mode, so as to permit the amateur operator to bear an attempt by another station, which may be a Federal user, to utilize the channel.

Read more at <http://www.arrl.org/news/fcc-proposes-additions-changes-to-amateur-5-mhz-allocation>.

From *The ARRL Letter*, May 13, 2010

ORDER IRCs ON LINE FROM USPS

Many hams have long complained about difficulties they have encountered when purchasing International Reply Coupons (IRC) from their local post offices. Now the US Postal Service (USPS) has made it easier to get those IRCs to send with your direct QSL cards -- order them online from the USPS Web site. The USPS ships all in-stock domestic orders for stamps and retail items within 1 business day via Priority Mail with

Delivery Confirmation or First Class Mail. Shipments should arrive within 3-5 business days. All stamp orders are charged a \$1 handling fee, regardless of the order amount. IRCs purchased from the USPS, whether online or in person at a post office, cost \$2.10 each. Read more [here](#).

From *The ARRL Letter*, May 27, 2010

NEW ARRL WEB SITE IMPROVEMENTS

As more and more people use the [new ARRL Web site](#), we are finding some minor bugs in the system and fixing them. Here are the latest improvements to the Web site:

- A link to your Section News is located right underneath the "Edit Your Profile" link at the top of the page. Just click on "Section News" and you will be directed to the appropriate page. This link is only available on the home page of the site.
- Users no longer have to log in each time they access the Web site. The site now remembers your log-in information and you will automatically be logged in on each visit.
- The [DXCC standings and Honor Roll](#), [DXCC application](#) and the [DXCC order form](#) are now available online.
- You can now [register hamfests and conventions](#) on the Web site.
- Find an [Amateur Radio licensing class](#) or an [exam session](#) near you.
- An amateur's current license class is now listed in the [Call Sign Search](#). Extraneous numbers in the amateur's FRN have also been removed.

"With a Web site as large as the ARRL's, we are constantly making improvements and changes," said ARRL Chief Operating Officer Harold Kramer, WJ1B. "We have received a lot of feedback from members and are trying to implement many of these ideas. One of our main goals at the moment is optimizing the club search function. We also understand that the Web site search function is not as functional as we would like. In time, once the Google engines crawl through the site and catalog it, the search function should greatly improve. We appreciate your patience and understanding as we work through the issues."

From *The ARRL Letter*, May 6, 2010

LINDA FERDINAND, N2YL – SK

Linda Ferdinand, N2YL, passed away May 4 due to complications from chronic heart failure. She was 63. Ferdinand served as Hudson Division Vice Director from 1980-1982, and as Division Director from 1985-1987. She was an extremely proficient Morse code operator and was active in the ARRL National Traffic System at the local, section, region and area levels, as well as serving in the Transcontinental Corps. An ARRL Life Member, Ferdinand received an advanced degree in computer science and worked for IBM, transitioning their mainframe computers to large computers based on small microprocessors running in parallel. She was also a member of the [ARRL A-1 Operator Club](#), [FISTS](#) and the Six Meter International Radio Club ([SMIRK](#)). Ferdinand was an avid quilter and lover of cats. She is survived by her husband Gary, W2CS, and son Brian, N2EKS, daughter Lauren and two grandchildren.

From *The ARRL Letter*, May 6, 2010

AREA AMATEUR EXAM SESSIONS

Amateur radio exam sessions in this area are as follows but please contact the responsible person to be sure that the time and date are accurate.

Wall Township, Camp Evans Area on Marconi Road: Exams are held on the first Saturday of the even numbered months (June 5, 2010) at 10 AM. The contact person is Pat Brannick, N2BZD at 732-267-0308 or e-mail to pbrannick@aol.com.

Middletown, Croyden Hall on Leonardo Road: Exams are on the second Tuesday of every month at 7 PM. The contact person is Mario Sellitti, N2PVP 732-787-7184 or e-mail to n2pvp@n2pvp.com.

Toms River, Riverview Park Recreation Building: Exams are held on the third Thursday of every month at 7:30 PM. The contact person is Ed Genoino, WA2NDA at 609-971-2792 or e-mail to wa2nda@aol.com.

Toms River, Holiday City South Clubhouse, Meeting Room #1, Mule Road at the corner of Santiago Drive on the second Saturday of the odd numbered months (July 10, 2010) at 10 AM and on the second Wednesday of the even numbered months (June 9, 2010) at 7 PM. The contact person is Larry Puccio, K2QDY, 732-349-2950 or lpuccio1@comcast.net.

In all cases, the fee is \$15 and you should bring the original and a copy of any amateur license presently held and original and one copy of any credit (CSCE) forms you have. Also bring 2 forms of ID with one being a picture ID.

POSSIBLE BATTERY REPLACEMENT

Failed batteries are a problem that plagues both cell-phones and Amateur Radio satellites. But Micro-Super capacitors may provide a solution.

Science Daily reports that Berkeley Lab researcher John Chmiola believes he has found a solution in electrochemical capacitors, which are commonly referred to as "super capacitors." This is because of their higher energy storage densities than conventional dielectric capacitors and higher abuse tolerance than batteries.

In a paper published in the April 23rd issue of the journal *Science*, titled "Monolithic Carbide-Derived Carbon Films for Micro-Super capacitors," Chmiola and Yury Gogotsi of Drexel University, along with other co-authors, describe a unique new technique for integrating high performance micro-sized super capacitors into a variety of portable electronic devices through common micro-fabrication techniques. They say that this evolving technology could eventually lead to an end to failed batteries in critical equipment including satellites where there is no way to replace a defective battery once the bird has been launched and is on-orbit.

You can Read the full ScienceDaily article 'Is There a Micro-Super capacitor in Your Future?' at <http://www.sciencedaily.com/releases/2010/04/100426092805.htm>

(WIA News, Science Daily, Science OnLine)

From *Amateur Radio Newslines*, May 21, 2010

CQ 2010 HALL OF FAME

On May 14, CQ magazine announced its 2010 Hall of Fame inductees, welcoming 15 new members into the CQ Amateur Radio Hall of Fame and two new members each into the CQ DX Hall of Fame and the CQ Contest Hall of Fame. Read more about the 19 new inductees [here](#).

From *The ARRL Letter*, May 20, 2010

NOTES ON CALENDAR (see last page)

Large call letters denote birthdays e.g. **KY2S** June 12. All times are EDST. Contests are listed in the June QST, p. 80.

June 1 – **Middletown Pancake House Luncheon** at noon at left rear table. All are welcome.

June 1 – **Monmouth Amateur Radio Club meeting** at 7 PM in Union Beach Police Annex (Municipal Building) on Poole Avenue.

June 1 – **Old Barney ARC Meeting**, 7:30 PM at Ocean Acres Community Center in Manahawkin, NJ. See <http://www.obarc.org>

June 1 and every following Tuesday – **QCWA News Net** on 147.045 PL=67 at 9:00 PM.

June 2 – **GSARA Meeting** at 7:30 PM at the Red Cross, West Park Ave. and Shafto Road in Tinton Falls.

June 3 - **Holiday City ARC meeting** at 7 PM at Holiday City South Clubhouse in Toms River.

June 4 – **W1AW Qualifying Run** at 10 PM (10-35 wpm). See June. QST, p. 84 or www.arrl.org/w1aw

June 6 – **LIMARC Hamfest** in Bethpage, NY (Long Island) at Briarcliffe College. Talk-in on 146.85 (PL 136.5). See <http://www.limarc.org>

June 6 and every Sunday – **InfoAge Marconi Hotel** open from 1 to 4 PM on Marconi Road in Wall. Exhibits by QCWA, OMARC, Antique Radio, Broadcaster's Hall of Fame, etc. \$5 donation requested.

June 7 - **Monmouth County ARES Net** meets on 147.045 +600, PL=67.0 at 7:30 PM.

June 8 – **VE Test Session** at Croyden Hall, Leonardo section of Middletown at 7:00 PM. For more information, contact Mario Sellitti, N2PVP at 732-787-7184 or n2pvp@n2pvp.com

June 9 – **Holiday City VE Session** at 7 PM in Toms River. Pre-register with Larry Puccio, K2QDY at 732-349-2950 or e-mail at lpuccio1@comcast.net

June 10 – **Jersey Shore Amateur Radio Society (JSARS)** meeting in Riverview Park Recreation Building, Rt. 527 and Riverwood Drive in Toms River at 7:30 PM.

June 12 – **OMARC Meeting**, 9:00 AM at the Diana Site on Marconi Road, Wall, NJ.

June 12-13 – **ARRL VHF QSO Party**, all modes from 2 PM Sat. to 11 PM Sun. See www.arrl.org/contests

June 13 – **Queens Hamfest** sponsored by Hall of Science ARC in Flushing Meadows, Corona Park. Talk-in 444.2 or 145.27 (both PL 156.5). See <http://www.hosarc.org>

June 14 - **Monmouth County RACES Net** meets on 147.045 +600, PL=67.0 at 7:30 PM.

June 16 – **GSARA Meeting** at 7:30 at the Red Cross in Tinton Falls. Antenna building party.

June 16 – **W1AW Qualifying Run** at 7 PM (10-35 wpm). See June QST, p. 84 or www.arrl.org/w1aw

June 17 – **JSARS VE Test Session** at 7:30 PM Riverview Park Recreation Bldg., Rt. 527 and Riverwood Drive in Toms River. Contact Ed Genoio, WA2NDA at 609-971-2792 or wa2nda@comcast.net.

June 18-20 – **SMIRK 6 Meter QSO Party**, Phone and CW from 8 PM Fri. to 7:59 PM Sun. See www.smirk.org

June 19 – **Piscataway Hamfest** Sponsored by Raritan Valley Radio Club at Plainfield High School (Lots 11&12), Behmer Road. Talk-In: 146.625 & 442.250 (both PL 141.3). See <http://w2qw.org>

June 19 – **Kid's Day** from 2 PM to 8 PM, phone. See www.arrl.org/kids-day

June 21 - **Monmouth County ARES Net** meets on 147.045 +600, PL=67.0 at 7:30 PM.

June 26 – **Neptune Amateur Radio Club Meeting** at 9 AM at the American Legion on Gully Road in Neptune.

June 26-27 – **ARRL Field Day** from 2 PM Saturday to 5 PM Sunday, all modes. See www.arrl.org/contests

June 27-July 4 – **Ten-ten Sprint of 76 QSO Party**, all modes on 10 meters from 8 PM Monday, June 28 to 8 PM Sunday, July 4. See www.ten-ten.org

June 28 -. **Monmouth County RACES Net** meets on 147.045 +600, PL=67.0 at 7:30 PM.

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--|--|---|---------------------------------|---------------------|-------------------|---|
| | | 1 Pancake House MARC Mtg 7 PM Old Barney ARC QCWA News 9 PM | 2 GSARA Mtg | 3 Hol. City Mtg. | 4 CW Qual. Run | 5 |
| 6 LIMARC Hamfst InfoAge | 7 RACES Net 7:30 | 8 Croyden VE 7 PM QCWA News 9 PM | 9 Hol. City VE | 10 JSARS Mtg. | 11 | OMARC Mtg. 12 KY2S VHF QSO |
| 13 KA2ZSI Queens Hamfst VHF QSO InfoAge | 14 ARES/RACES 7:30 | 15 W2HAM QCWA News 9 PM | 16 CW Qual. Run GSARA Mtg | 17 JSARS VE | 18 SMIRK | 19 SMIRK Piscataway Fest Kid's Day |
| 20 SMIRK InfoAge | 21 WB2KCV ARES/RACES 7:30 | 22 QCWA News 9 PM | 23 | 24 | 25 | Neptune Mtg 26 N2LXM Field Day |
| 27 W2HTS Field Day 10-10 | 28 10-10 | 29 10-10 | 30 10-10 | | | |



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FIRST CLASS