

# UP-LiNK



W2CRA

## THE OFFICIAL PUBLICATION OF THE CHERRYVILLE REPEATER ASSOCIATION II, INC.

*"Community Service Through Communication"*



*May 2000*

**BOARD MEETING May 9 8:00 PM**

**CLUB MEETING May 11 7:30 PM**

### FIELD DAY 2000

Friday afternoon, 2:00 PM set up begins and help is needed through 6:15 PM. Barbecue at 6:15

Saturday 9:00 AM until 2:00 PM set up continues. Stop for lunch at 12 Noon.

2:00 PM On air operation begins and continues for the next 24 Hrs. Dinner is ready at 5:30 PM. Operations continue through the night. Come out and try your fist and/or your phone technique.

Sunday 7:00 AM Breakfast is started. Some of the operators don't stop for any meal so we need people to see to it they get fed. NOON it's time for the famous Chili festival.

2:00 PM Operation ceases! Now comes the hard part, bodies are needed to take everything down and store it away in the club trailer for next year or any emergency that may require its use. Every one is welcome. Stop at the Information booth and sign in each day.

#### FIELD DAY PINS

George N2VWL has Field Day pins available for last and this year for anyone participating in Field Day activities. They will be available at the meeting.

### ELECTION RESULTS

President: N3QDC Rob France

Vice President: KB2DDM Susan MacRae

Secretary: K2YSY, Pete Sneed

Treasurer: W2NCN, Bill Greenhalgh

#### Board Members at Large:

2 year term N2ZVY Patrick Mauro

2 year term W2CGX Barry Campbell

1 year term W2GD John Crovelli

1 year term N3MSK Ed Kita

1 year term K2PA Roberto Matos

Congratulations to all!

### Cherryville Repeater Association Memorial Scholarship Awarded

The Cherryville Repeater Association (CRA), an amateur radio organization that has been providing communications services at public service events and during local emergencies in the Hunterdon/Somerset/Warren tri-county area for over 20 years, announced at their April 14<sup>th</sup> club meeting held in Flemington the selection of a Hunterdon County youth as this year's recipient of their memorial academic scholarship.

The recipient of CRA's Year 2000 Memorial Scholarship is Maria Russo of Lebanon Township. The amount of the scholarship award is \$500.00.

Ms. Russo is the daughter of Peter and Annette Russo. Her father is a longtime member of the Cherryville Repeater Association. Maria currently lives at home with her parents, and will graduate from Voorhees Regional High School this June.

Maria displayed both academic excellence and has participated in many high school and church activities. These attributes, along with other criteria, were used by the scholarship committee during the decision making process.

At the May 12<sup>th</sup> meeting the scholarship committee will present Maria with her award. On the Scholarship committee are club members John Crovelli, Elaine Langdon, and Patrick Mauro. The Club President, Rob France, will present the winner with a scholarship certificate as part of the award ceremony.

The CRA memorial scholarship honors the memory of deceased club members.

**FIELD DAY JUNE 23-25  
BE THERE!**

## CRA PROGRAM SCHEDULE

**MAY 12** "Danger HIGH VOLTAGE"  
Al Saharic (GPU)

**JUNE 3 SATURDAY** FIELD TRIP 10:30 AM to WWOR TV  
Broadcast Center, Secaucus, New Jersey.  
Call Denis KA2YYB to confirm, directions at May club.

**JUNE 9** "Field Day" John Crovelli W2GD, followed by  
"Transformers, Baluns, and Verticals" Jerry Sevick W2FMI

**JULY 14** "Space Communications, OSCAR13, and EME  
(moon bounce)" Chris Fagas WB2VVV

**AUG 11** "Transmitter Hunting" antennae construction and  
testing Ed N3MSK, Brian N2RDL, Denis KA2YYB

**SEPT 8** "The Future of Amateur Radio"  
Steve Mendohlson WA2DHF

**OCT 13** "APRS, theory and practice"  
Ronald Hepburn N2LCZ and associate

**NOV 10** "CRAII Homebrew Show and Tell night"  
contact Denis KA2YYB

**DEC 8** CRAII Awards Banquet

## HAMFEST CALENDAR

May 7	Warminster ARC	Wrightstown, PA
June 3	Bergen ARA	Teaneck, NJ
June 10	Colombia-Montour ARC	Bloomsburg, PA
<b>June 17</b>	<b>Raritan Valley RC</b>	<b>Dunellen, NJ</b>
July 2	Murgas ARC	Wilkes Barre(Dallas), PA
<b>July 16</b>	<b>Sussex County ARC</b>	<b>Augusta, NJ</b>
July 16	Mid Atlantic ARC	Kimberly, PA
August 13	Jersey Shores ARS	Bayville, NJ
Sept. 16	Delaware Lehigh ARC	Schnecksville, PA

Note: CRAII is not responsible for typographical errors or  
spousal intervention.

George, N2VWL

## NEW SCI FI HAM FILM

The new sci fi film "frequency" at the local movie. This  
film gives an interesting twist to ham radio, and is sure to  
appeal to all radio buffs--especially if you grew up with  
heathkit equipment (was it an sb303 that they showed in the  
movie?). If you liked the "back to the future" series of time  
travel movies--you will really like this new movie. Enjoy!

## SKYWARN

17 May, 2000 @ 7:30 PM  
Somerset County Fire Academy  
Somerville, NJ

25 May, 2000 @ 7:30 PM  
Vernon Municipal Bldg.  
Church St., Vernon (Sussex Cnty.) NJ

Directions to these and other sites can be found at:  
<http://wx2phi.skywarn.net/skywarn~training.html>  
George, N2VWL

## ATV & SKYLANDS

Marty Focazio is looking to do some work with ATV links  
in anticipation of the Skylands Triathlon. Anyone with an  
interest in experimenting with ATV transmission on please  
contact him by email [kc2cxh@qsl.net](mailto:kc2cxh@qsl.net)

## A5 Bhutan QRV now!

Jim Smith was issued A52JS and local, Dasho Yonten  
A51TY are on the air, legit! GL all and lets hope the DX  
police/LIDS are QRT... GL de Phil W2GE

They will be active until May 12. Operations will be on  
160 to 6 meters using CW, SSB and RTTY. QSL via W0GJ.

## DXCC DESK ACTION

I received this email just a few days after sending my cards  
to the League by UPS, thought some of you might find it  
interesting:

*Hi Keith!  
I am a fellow NJ Ham (from "down the shore".) I had a few  
days off this week so I drove up to Newington CT for the first  
time to check things out and to have 113 cards checked for my  
first DXCC. (Two cards were duplicate Russian entities, so I  
wound up with 111 confirmed.) Got my certificate right there!*

*Anyway, while Bill was checking my cards I saw your stack on  
his desk. I assumed you were from "5" land but then I noticed  
you were from NJ so I thought I would e-mail you to let you  
know your cards are safe and sound at the DXCC desk!*

*73,  
Tom N2LDE*

# PUBLIC SERVICE

## HORSE TRIALS

MAY 13TH

The Buck's County Horse Trials on Saturday May 13 (the day after the meeting). I have approx. 12 people signed up from the last club meeting, but the more the merrier!! George N2VWL will be doing the onsite coordination as I will be grooming for about 4 people. Same deal as last time, I'll have details about start time and directions for anyone who needs it at the meeting. People will probably need to arrive around 8:00 or 8:30. Anyone interested please contact me or George.

73 Susan KD2DDM

*Duncan will be a participant in this event, so you get a bonus if you come out for this event!*

## 4th of JULY PARADE

The Lebanon 4th of July Parade will be, you guessed it, July 4th in Lebanon. Come join the fun, have some hot dogs and beer (root or regular), see the sights, and show your patriotic and club spirit. 20 people are needed!

## MARCH OF DIMES WALKATHON REPORT

A very nice day, sunny and warm, but very very windy. It seemed they had a slightly smaller turnout than I remember in previous years, although this is the first time I have been to it at this location. (Compared to the Triathlon, the parking lot and crowds were very small.)

The event went off without a hitch, the most excitement being one of the ambulances taking a call for a rescue from the reservoir for a boating accident.

CRA Participants:

KB5U,W2CG,W2RIJ,KA2TOV,N2ZVY,W2GD,K2YSY

## American Lung Association seeks hams for 2000 "Big Ride"

The American Lung Association is recruiting ham radio "communicators" to assist in its Big Ride Across America 2000. The 2000 ride--only the second to use ham radio operators--is the third annual event to raise money and awareness for the American Lung Association's fight against lung disease.

It's a 3500-mile bicycle trek from Seattle, Washington, to Washington, DC, from June 19, 2000 to August 5, 2000. More than 850 cyclists have raised in excess of \$7.2 million during the previous rides.

Details are available at <http://www.bigride.com>. Volunteers can sign up for the entire Ride or choose from one or more segments of the country. The direct link to volunteer information is <http://www.bigride.com/Get/get.html>. The Crew Registration Form on that page lists the segment dates and locations.

# BOARD MEETINGS TIME CHANGED

The board and I decided that we need to adjust the time of the board meeting back to 8:00pm.

*"Board meeting: Wednesday prior to the second Friday of the month, 8:00pm at the Hunterdon County EOC. Please note that board meetings are always open to the general membership."*

We want to stress that board meetings are always open and that all members should feel welcome. We'd love to hear from them.

We are not going to change the general membership meeting time on Friday. The time will remain set at 7:30pm.

Thanks, Rob

# CRA II CLUB INFORMATION

The Cherryville Repeater Association II, Inc. is a non-profit New Jersey Corporation dedicated to Community Service Through Communication. **Meetings** are held on the second Friday of each month at **7:30 PM** at the **Flemington Baptist Church** unless otherwise announced. Visitors are always welcome! Also, everyone is welcome on the Thursday Night Traffic Net, at 8 PM every Thursday, followed at 9:30 by the Swap-Net, and the ARES-RACES net at 8:30 PM on the first Thursday each month (immediately following the traffic net), all on the 147.375 repeater.

## UPLINK A CRA II Publication

### Editors

Articles & Info: KB5U, Keith Burt - kb5u@blast.net

Interviews: K2PA, Roberto Matos - K2pa@arrl.net

Roster & Mailing: W2CG, Marty Grozinski

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Many thanks to all those who have contributed articles or information for this publication, including: The ARRL, ARRL Letter, QST, The Hudson Loop, N2FF, W9HB(KJ9O), N3QDC, W2CGX, N2ZVY, N2OCW, W2GD, KB2DDM and all not mentioned for their help. This newsletter is an open forum for the Cherryville Repeater Association, II Inc. and its members, of general interest Club and ham radio related interest items. The opinions contained herein are those of the authors who have contributed their work. The officers and members of the CRA II Inc. are not liable for its contents. Articles and information are always welcome, and may sometimes be edited for content, punctuation, grammar, and newsletter space.

**Deadline for submission for all issues is two weeks prior to the Board meetings.**

# LOST & FOUND

**LOST:** Two batteries for the Yaesu FT-50 handi talkie. I believe I took them to an event and apparently left them there. If you have seen them or possibly picked them up and didn't know to whom to return them I would sure appreciate it! One has a belt clip, the other doesn't. Barry Campbell, W2CGX. Ok on the roster or email to [barryc@compubell.com](mailto:barryc@compubell.com)

Thanks!

## Antenna Construction

New Antenna Conductor Material  
for Efficient Very-Small Antennas

One of the all-time favorite topics of discussion among Hams is antennas. Most of us probably think that towers, beam antennas, wire antennas, etc., are rather attractive. Unfortunately, it seems that many of our neighbors don't share in this opinion. In fact, some of them think that antennas are downright ugly and detract from their property values. Also unfortunately, it is a fact that antennas are required for both the transmission and reception of radio signals. Given these conflicting pressures, it is only natural that there is a lot of research being done on how to make antennas smaller, yet not make them inefficient. We can see this in the proliferation of such miniature antenna products as the Isotron, the Super-C, the Crossed-Field Array, the Contrawound Toroidal Helical Antenna, etc. There have been a lot of wild claims made recently about such miniature antennas, however, when put to the test, many of them perform about as well as dummy loads.

Recognizing the great need for a truly high performance miniature antenna, I set out to invent one for myself. Being an engineer, I approached this problem logically and mathematically. There is no physical law that forces small antennas to become inefficient. A very short dipole antenna has a gain just slightly less than that of a conventional half-wave dipole. This is not due to inefficiency, but to a slightly different radiation pattern. In practice, the reason that very short dipole antennas become inefficient is that the radiation resistance becomes very small with respect to the resistance of the metal (Copper, Aluminum, etc.) that the antenna is constructed of. Consideration of this led me to the conclusion that there are at least two ways to go:

1. Increase the radiation resistance of a small antenna, or
2. Decrease the resistance of the metals from which the small antenna is constructed.

I could see no way to attack the first alternative, therefore I decided to investigate ways to decrease the resistance of the metals. Suddenly, the light came on: the reason that the metals used for antennas have significant resistance is that radio frequency currents flow on and near the surface of the metal. In other words, radio frequency currents utilize only a small fraction of the available cross-sectional area of the metallic

conductor, and as a result, flow through considerable resistance. It would be nice if somehow, we could attract the current toward the center of the conductor, and utilize as much of the conductor's cross sectional area as possible for the radio frequency current flow. How can we fix this? It is well known that the current that flows in metallic conductors consists of electrons, and that electrons are negatively charged. Negative charges are attracted by positive charges. If there were positive charges in the center of the antenna conductor, then some of the electrons that normally flow on or near the surface would be encouraged to travel nearer the center.

I had my lab assistant construct a special conductor for use in high frequency radio antenna construction. This conductor was made in a way similar to how ordinary electric fence wire is made. The difference was that the inner portion of the wire was made from a highly p-doped semiconductor material (similar to what is used for the bases of NPN transistors), rather than the Steel material used in electric fence wire. This then was coated with a Copper layer. The ratio of the semiconductor radius to the thickness of the Copper layer was about 1:1.

By now, you probably have grasped the basic concept: the RF current that flows in the central portion of the special conductor is composed of positive charges, which is the mechanism by which current flows in any p-doped semiconductor material. At the same time, the RF current that flows in the outer Copper layer is composed of the usual negatively charged electrons. Since the positively charges flowing in the center attract the negatively charged electrons that are simultaneously flowing in the outer layer, this attraction causes the electron flow to spread more deeply into the Copper, and the resistance of the conductor at radio frequencies is dramatically reduced.

I wanted to give this material the ultimate test. Therefore, I built a center-fed dipole from it, and cut the length of the dipole to 1 foot. I then mounted this dipole on top of the mast that already existed on the roof of my house. It was about 35 feet off the ground. I tried transmitting with it on 160 Meters, but the SWR was outrageously high! However, my trusty antenna tuner soon took care of that minor problem, and I was successfully delivering 100 Watts of RF power to a nearly invisible 1 foot long dipole antenna on 160 Meters! I waited until it got dark, and then I held the key down. I sent my XYL outside to look at the little dipole. It did not start glowing red or melting! Therefore, I decided to jump in the pile-up for the Clipperton Island DXpedition. They came back to me on the very first call with a 599! Wow! That's the real proof-of-the-pudding, eh? I am uncertain whether to market the material, or the antenna. Please send me your opinion as soon as possible.

73, Cornelius Crank, Ham, Meritorius  
Article submitted by Robert Stedman K9PPW

## OO notice

The following actually on a repeater in central Jersey a few weeks ago. One ham was telling another how he had missed his chance for the upgrade sessions on April 15th. There was a third party listening to the conversation. The calls are left out to protect the innocent...

Ham: 'oh screw it, maybe next time'

OO: I am an OO and you just crossed the line

Ham: what do you mean?

OO: you said the S word

Ham: I did not say the F word, I said screw it

OO: not the F word, the S word and you just did it again.

Ham: I said what?

OO: the S word

Ham: you mean screw it?

This went on for a few more rounds, getting more incredulous. A few days later the Ham received an official post card from the OO for his 'infracton' of FCC rules.

For those who are not aware, OO stands for 'Official Observer'. OO's are hams who volunteer to watch over the ham bands for infractions of FCC rules. On the HF bands, they often watch for people operating out of bands for which they are licensed, or out of the bands altogether. Many contesters and DXers have received an OO post card for operating too close to the band edge.

## What a difference an antenna mistake can make!!!!

I thought I was RF challenged down in this canyon (I get absolutely no FM radio reception here) so I didn't think much about my 40 meter dipole having a BAD feed line configuration.

I cut some nyties and set it up again and then WOW..... reception increased 100 fold. My RFI problems also stopped and my computers stopped crashing when I keyed more than 10 watts.

So... I edged up to 50 watts and made a contact in New York. New York was always off limits before...I never get New York. I think it worked. I had worked CUBA with 6 watts so I really didn't mind running low power because higher would blow my computers up.

Are conditions absolutely gangbusters tonight ? or was I always supposed to hear CW on every frequency between 7.105 and 7.120 and 7.010 and 7.058 at 1AM in the morning? suddenly ..... I feel like it's crowded here.

## HAMFEST TALK-IN



W2CRA CHERRYVILLE HAMFEST 2000 TALK IN  
BY W2CGX, BARRY CAMPBELL

## AN OLD HAM RADIO JOKE...

Ham 1: Hey did you hear that ol' Smedrick KB3ZZZ died last week?

Ham 2: No! That's too bad...what did he have?

Ham 1: Oh, an FT1000, an Alpha 77, a TH6 and two elements on 40....

## EASY WEATHER

If you want to find out what the weather is expected to be in some sensible detail there are a couple of websites which do the job pretty nicely.

For west of the creek:

<http://iwin.nws.noaa.gov/iwin/pa/state.html>

For east of the creek:

<http://iwin.nws.noaa.gov/iwin/nj/state.html>

**THE CHERRYVILLE REPEATER ASSOCIATION II BOARD OF TRUSTEES:**

Pres	N3QDC	Rob France	(215) 766-8066	<a href="mailto:n3qdc@att.net">n3qdc@att.net</a>
VP	KB2DDM	Susan MacRae	(908) 475-5299	<a href="mailto:kb2ddm@fast.net">kb2ddm@fast.net</a>
Sec	K2YSY	Pete Sneed	(908) 369-5095	<a href="mailto:k2ysy@arrl.net">k2ysy@arrl.net</a>
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	W2GD	John Crovelli	(908) 996-3043	<a href="mailto:w2gd@hotmail.com">w2gd@hotmail.com</a>
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	K2PA	Roberto Matos	(908) 788-8253	<a href="mailto:k2pa@arrl.net">k2pa@arrl.net</a>

**COMMITTEE CHAIRPEOPLE:**

Public service	N2UYV	(908) 253-8783	<a href="mailto:tmclaughlin2@worldnet.att.net">tmclaughlin2@worldnet.att.net</a>
Technical	N3MSK	(610) 252-6193	<a href="mailto:n3msk@amsat.org">n3msk@amsat.org</a>
Hamfest	N2MQZ K C2CMC	(908)454- 4370 (908) 806- 3998	<a href="mailto:n2mqz@aol.com">n2mqz@aol.com</a> <a href="mailto:varas@sprintmail.com">varas@sprintmail.com</a>
Emerg Mgmt	KC2CMC K2PA	(908)806- 3998 (908) 788- 8253	<a href="mailto:varas@sprintmail.com">varas@sprintmail.com</a> <a href="mailto:k2pa@arrl.net">k2pa@arrl.net</a>
Education	W2CGX	(908) 725-0478	<a href="mailto:barryc@compubell.com">barryc@compubell.com</a>
VE Testing	W2CG	(908) 788-2644	<a href="mailto:mjgrozi@postoffice.ptd.net">mjgrozi@postoffice.ptd.net</a>
Field Day	N3QDC	(215) 766-8066	<a href="mailto:n2qdc@worldnet.att.net">n2qdc@worldnet.att.net</a>
Holiday Party	KB3RWY	(908) 253-8783	
Merchandise	N2VWL	(908) 475-4716	<a href="mailto:n2vwl@juno.com">n2vwl@juno.com</a>
Traffic net	N2MIF	(908) 638-6172	
Programs	KA2YYB		
Refreshment	KB2YJX	(908) 725-0478	
Roster	W2CG	(908) 788-2644	<a href="mailto:mjgrozi@postoffice.ptd.net">mjgrozi@postoffice.ptd.net</a>
Scholarship	N2ZVY	(908) 479-6346	<a href="mailto:kc2boh@worldnet.att.net">kc2boh@worldnet.att.net</a>
SkyWarn	N2VWL	(908) 475-4716	<a href="mailto:n2vwl@juno.com">n2vwl@juno.com</a>
Uplink	KB5U	(908)-252-1974	<a href="mailto:kb5u@blast.net">kb5u@blast.net</a>

**NET SCHEDULE:**

Hunterdon County Traffic and Emergency net	Thursday, 8:00 PM	147.375
Races net	1st Thursday, 8:30 PM	147.375
SkyWarn net	Thursday 9:00 PM	147.015
Swapnet	Thursday, 9:30 PM	147.375
Complex repeater net	Sunday, 7:30 PM	147.015
CLUB INFO LINE (908)	WEBSITE <a href="http://www.qsl.net/">www.qsl.net/</a>	PACKET W2CRA 145.51

788-4080		<a href="http://w2cra.com">w2cra</a>	
446.475- W2CRA	444.850 + W2CRA	224.120 - K2PM	147.015 + (SZ) WB2NQV

**UP-LINK**  
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