



# CARA

CAPERS

Candlewood Amateur Radio Association P.O.Box 3441, Danbury, CT 06813-3441

July 1994

## President's Column

On behalf of the newly elected Officers and Directors of the Candlewood Amateur Radio Association, I would like to welcome all the members to another year that will be filled with interesting programs and events. I would like to thank Paul, WS1Q, for his outstanding leadership over the past year. His emphasis on HF operations and easy going style made last year another tremendous success for our club.

Building on this success, I would like to propose a theme for the next year. There is more to Ham Radio than 2 M and 440 FM!. Recently the Executive Committee met to begin the planning process to bring programs and events that will emphasize many facets of our hobby.

I would like to thank Doug Griffin, WA1KRX for his work on the next program dealing with Direction Finding and Fox Hunting. This should be a fascinating program that will culminate in our own CARA fox hunt in August! The program for the July meeting will be at the church and begin promptly at 8pm. There will be no formal meeting during the summer months.

The Connecticut QSO party is the weekend of July 30 and 31. We have the opportunity to operate from W1AW on Sunday July 31st. If you would like to operate from W1AW, please contact Frank, N8WXQ.

Finally, we need volunteers to help with the printing, folding, and mailing of the CAPERS. Jeanne, N1JZR will continue to gather and accumulate the articles and Jay, KD1GP will continue on as Editor. Please contact either Jeanne or myself if you are interested.

I hope all of you have a nice summer and safe travels. I hope to see many of you at the July meeting and August Fox Hunt. Should you have any questions or ideas on programs that you would like to see or participate in, please call me on the radio or phone or packet at K1UOL. My home number is 438-6782.

Best 73's,

John N2DVX

Next VE TEST SESSION  
September 3rd St. Paul's Church  
Brookfield, CT

## CARA ELECTS '94-'95 OFFICERS

On June 10th CARA membership elected new officers and directors. The slate of officers presented by the nominating committee was elected as secretary, Jay, N1NRP cast one vote for all members. The new officers are; John, N2DVX, President; Ken, KD1DD, Vice President; Bonnie, N1PFV, Secretary; and Jerry, N1JZQ, Treasurer. The directors are; Pete, KZ1Z; Wayne, WA1PMA; and Don, WB1DSB.

## Comet Crashes into Jupiter !

In mid July the Shoemaker- Levy 9 comet will crash into the planet Jupiter. The comet has 19 separate fragments; the impact of each fragment will be comparable to that of the meteor thought to cause the extinction of the dinosaurs 65 million years ago or 250,000 megatons of TNT. The event promises to offer opportunities for natural radio emissions monitoring.

The Shoemaker-Levy 9 comet was discovered by Eugene and Carolyn Shoemaker together with David H. Levy on 25 March 1993 at Palomar Mountain in California. The Comet is interesting to Astronomers because its nucleus is split into fragments. Of course the upcoming event is also of interest. The table below shows the impact times for each fragment according to orbital calculations.

Jupiter is known to emit electromagnetic radiation in the shortwave (HF) region. The emissions were first noted in 1955 near 22.2 MHz. The normal radio emissions from Jupiter are thought to result from the interaction of the moon Io with the planets magnetic field.

The equipment required for listening should include a good shortwave receiver and an antenna. Simple shortwave receivers may require a preamp to increase signal strengths. An antenna capable of receiving in the 21MHz region is needed. A dipole optimally oriented in the east-west direction or an upward directed loop are likely to be good simple antennas. You may wish to record the events using a voice activated recorder. If you have a stereo tape recorder and two receivers connect one channel to Jupiter and the other to WWV for a time stamp.

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The best frequencies for monitoring events will be between 18 and 28 MHz. Remember to use frequencies above the MUF (maximum usable frequency) as frequencies below the MUF will be reflected back into space. Usually the MUF will be below 18 MHz between midnight and 6:00 AM local time.

Further information can be found in the June issue of *Monitoring Times* as well as the June and July issues of *Sky & Telescope Magazine*. You may also contact the Society of Amateur Radio Astronomers, c/o. Tom Crowley, 3912 Whittington Drive, Atlanta, GA 30342. SARA would appreciate a \$3.00 donation to cover their costs.

Fragment	Date (UTC)	Time (UTC)
21	16 July	19:26
20	17 July	02:36
19	17 July	06:29
18	17 July	11:31
17	17 July	14:38
16	18 July	00:29
15	18 July	07:12
14	18 July	18:43
13	Disappeared	
12	19 July	10:05
11	19 July	21:22
10	Disappeared	
9	20 July	09:50
8	20 July	14:38
7	20 July	19:12
6	21 July	06:43
5	21 July	14:38
4	21 July	18:00
3	21 July	21:07
2	22 July	04:18
1	22 July	07:41

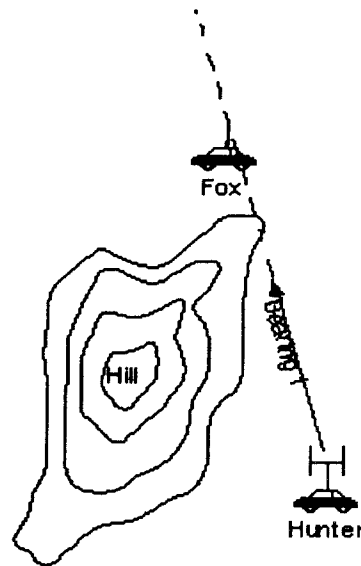
Approximate date and time of comet fragment impact



**WANTED:** The old CARA banner. Last seen at a FIELD DAY several years ago. If you know where it is please call, N2DVX at 438-6782.

## A Hunting We Will Go!

Doug Griffin, WA1KRX, will give a talk entitled, *A Guide to Successful Transmitter Hunting* at the July 8, CARA meeting at 8PM. The goal of transmitter hunting is to locate a hidden transmitter. Fox hunting makes use of your radio operating skill, intuition and dexterity. It can be exciting, frustrating and rewarding. During the interactive discussion, Doug will present the elements of transmitter hunting and methods to help minimize frustration and maximize your fun and success.



WA1KRX will describe the minimum equipment needed for fox hunting. The equipment summary will include the receiver, RF attenuator, directional antenna, compass, chart, plotter, pencil and clip board.

Doug also will describe how several people can use teamwork to combine into one group with each person specializing in one of the tasks required to find the transmitter. Your strategy for the chase should begin before the fox begins transmitting.

Radio direction finding at sea or on a flat desert is relatively uncomplicated. Just follow the signal maximum until you collide with the transmitter. On land however, several sources of interference complicate direction finding. Doug will discuss these.

Bring your questions and we'll see you there!

*Handwritten note:* K9204

# HI TECH ANTENNA DOESN'T HELP THIS HUNTER!

Editor's note: The following is a great fox hunt story sent in by Marty, K1CVF.

CARA is having a Foxhunt. So what's a Fox Hunt? It's a lot of fun and a good time for all! It starts with a hidden transmitter that begins sending a short transmission at predetermined intervals. The hunters usually start at one location and everyone races off in different directions after "getting a fix" on the first transmission. When the "hunt" is over everyone goes to a pizza joint to tell their tales of the hunt.

It's 1982, Dave, KA1JV, and I start out in my VW Rabbit. We're armed with a double-ground-plane antenna made of PVC pipe bristling with lots of welding wire and dangling coax. This antenna is precisely made, tested, and guaranteed to have a fantastic null - so deep that direction finding is a "piece of cake." We're confident...we have a Gangbusters Antenna, a big brass compass, a huge detailed map of the whole area, and a Kenwood 2400 HT wrapped in aluminum foil, and a home-made step attenuator to lessen the overload (when we get really close to the Fox).

But, we start out late. Mike, KJ1D, our third team member, calls us on the repeater..."Where are you?" "We're coming, we're coming..." Five minutes later we're almost to his house. Mike has this long curved driveway with low tree branches. "Jeez Dave, look out for the antenna"...TWANG...woops, lost an element...we stop, retrieve the element, and arrive shouting to Mike that we need a soldering iron, fast. the only one he can find is a 25 watt pencil iron which does NOTHING. The clock is ticking..."They're going to start without us"...Mike finds a bigger iron...the element is secured. We're off! We make the starting point in time. There are cars with all sorts of antennas. Everyone is checking their equipment...antennas are turning and turning. There's a Yagi, a Dopplescan, and a double loop...they look good, but we know our antenna is really good...we've checked and rechecked it...it's deadly accurate...the antenna is the one piece of equipment that makes the difference.

It's almost 7:00...starting time... There's the first transmission! We get a good

bearing...dead south. Mike draws a north-south line on the map. We head south as fast as my VW Rabbit (with three occupants) will go. The next transmission will come in ten minutes. "Do we plan ahead and go for a high spot or do we try to get as far south as we can?" We have three different opinions on only two choices (hi). We don't know what we're doing; we've never done this before.

The signal comes on again...we're going just a little over the speed limit so take the bearing "at speed" and adjust the attenuator. The signal goes away with only 10 db of attenuation. How can this be? We're closer, aren't we? No, the signal is coming from the right... That's not south. Mike notes the bearing and draws a second line on the map - it's at right-angles to the first bearing. The Fox stops transmitting and we head west. One of the bearings is false...the next one will certainly lie directly upon one of the two previous and we'll know exactly the direction to the Fox.

Ten minutes later... There's a signal. But it's so weak that we can't get a bearing. Great! Is all the coax connected? Antenna intact? Yes and yes. But the duct tape holding the antenna to the car has come loose. Dave has the passenger window completely open and says his hand is getting cold. Mike says the windstorm in the back seat is shredding the map and he's getting cold. We'll go to higher ground to get a better signal. None of us knows the area...where's higher? We must have been in a null. At 50 mph?.

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We remember that we never checked the effect of the car's metal on the compass.

Twenty minutes pass with two more transmissions (we think) and we hear nothing.... so we decide to go back where the signal was stronger.

Everyone else must be there by now. Go back to I-84; it's high and we can cover a lot of ground fast once we get a good signal again, Mike shouts

One more intersection and there's the ramp to '84. Rats, the light turns red. We stop. A car pulls up on our right. I look over at the woman's expression as she looks at Dave holding the PVC pipe mast and wire. She looks puzzled. With my index finger I make a circular motion next to my temple and point at Dave. She nods an affirmative. The light changes. We charge onto I-84.

Neither of the next two bearings lie upon either of the two original bearings. We leave I-84.

We pass Rose, WA1VOP, as we do 50 mph heading south on Route 7. She's going 50 mph heading north. She must be wrong. Another transmission: it's from the north this time. We turn north.

Another red light. Across the intersection goes the car with the Dopplescan antenna...he's headed east. He must have the correct bearing. We follow him. We lose him. We're lost.

Another transmission...a REALLY BIG signal...we're close. Switch in some attenuation so we can get a deadly bearing... GADZOOKS. Something's wrong...the attenuator is working BACKWARDS ...The switches are dirty. We either get a full-quieting signal or NO signal.

Need to get higher, away from reflections, and ghosts, and alleys.

There's a hill to the west, above downtown Danbury. We go up. We'll get a good bearing from there, I said.

Around the last corner, almost at the top... What are all those cars doing here? They all have 2 meter direction-finding antennas. They ALL found the Fox...we find the Fox.

We didn't find the Fox with our direction-finding antenna. We just drove every road (and most of the alleys) in Danbury until we got there. And we really didn't know that we didn't know what we were doing.

But, we had a great time. The pizza and beer were great. The stories of the Hunt were better. We need to do it again.

Marty, K1CVF

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The DXAC also voted to approve call area "calling guidelines." The guidelines call on DX station to "operate in a manner perceived to be fair and balanced to all areas, and to work portable stations in the specific call area listen(ed) for."

The FCC has proposed to change its rules for equipment authorization procedures that apply to radio frequency (RF) devices including radio receivers and transmitters, computers and video cassette recorders. The FCC said the amended rules were "intended to remove certain inconsistencies in the existing rules and to consolidate in the rules several interpretations issued in letters. These inconsistencies have led to confusion for industry and may have discouraged or prevented use of some otherwise legitimate methods of marketing RF devices pending receipt of an authorization from the Commission."

Currently, FCC rules prohibit the marketing and operation of an RF device unless it complies with all FCC standards. Exceptions to the marketing rules are already made for industrial, scientific and medical (ISM) devices and many digital devices.

## Become Rich and Famous as an Author!

Well, not rich, but Famous among your CARA brethren. The CARA Capers is a volunteer supported newsletter with a very easy editorial policy, we print pretty much anything. If you've been a closet Hemingway all your life, now's your chance. To submit an article on ham or club related things, type it up on your favorite Word Processor. We can use any version of Microsoft Word for DOS or Windows, Word Perfect for DOS or Windows, AMI Pro, Windows Write, or just a plain ASCII (TEXT) file.

You can submit it on any size or density disk, as long as it's a DOS format disk. If you belong to Compuserve or ZiffNet, send it to Jay Munro CIS # 72241,554, or via the internet Jay Munro 72241.554@CompuServe.COM. If you have a modem, but none of these services, a transfer can be arranged on a limited basis (bring a disk to the meeting would probably be better).

If you use a word processor, please do not try to do desktop publishing. You could easily spend several hours making it beautiful, only to have it all stripped out for publication. Save work for everybody and just type in the text. Let your word processor do the word wrapping for you, ending every lines with a carriage return makes it more difficult to format. If you have a table or chart, use Excel or Lotus (preferably Excel) and send the XLS or WK1 file.

That brings up deadlines. Our drop-dead deadline is around a week before the regular meeting, so we can get it printed and in the mail. If you submit files on disk, or via email, our usual deadline is the 25th of the month. If you're hot and heavy into a story and know you'll be late, let us know so we can expect it.

So, dust off those keyboards and get to work. If you submit by mail, send it to CARA CAPERS, P.O.Box 3441, Danbury CT 06813-3441, or give disks and hard copy to Jeannie N1JZR or Jay KD1GP.