



# ZERO BEAT

Southeastern Massachusetts  
Amateur Radio Association, Inc.  
54 Donald Street  
South Dartmouth, MA 02748



OUR 72nd YEAR

Volume 40, Issue 9

SEMARA W1AEC

September 2004

## FLEAMARKET 2004



SEMARA FLEAMARKET CA. 1999

**W**ith more than 25 years of experience, SEMARA will hold their Fleamarket

on Sunday, September 12, 2004, rain or shine, on the SEMARA Clubhouse grounds at 25 Donald Street, S. Dartmouth, MA. Sellers spaces are free and setup starts at 6 a.m. General admission fee for buyers is \$2. The fleamarket runs from 7 a.m. to 12 noon.

- **Free admission** for spouses and children.
- **Food tent** is open all day—coffee, donuts, *free* soda, hot dogs, hamburgers, linguica, cheese-burgers, apples, chips, etc.
- **Door prizes** @ noon—you must be present to win.
- **Grand Door Prize:** ⇒ Icom IC-T7H 2m/440 Transceiver.
- **Talk-in:** W1AEC repeater 147.000+.
- **GPS:** N 41° 36.795' W 070° 56.590'



*73 de Bob Kelley, K1KVV*



### CHICKEN BBQ

Saturday, September 18 @ 12 noon

Tickets are only \$5

Mark your calendar

Tickets go on sale @ 6 p.m. on 9/2

### MEET A NEW MEMBER



**BRIAN FREEMAN, N1LFE**

**Brian, N1LFE**, from W. Haven CT, is the System Operator of the cross-over node of the IRLP-EchoLink for the New-England Network that was described in the July 2004 issue of Zero Beat.

## ZERO BEAT

Published monthly by the  
**Southeastern Massachusetts  
 Amateur Radio Association, Inc.**  
 54 Donald Street,  
 South Dartmouth, MA 02748

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### ADVERTISING

Club members have one free non-  
 commercial ad per month.

\*\*\*\*\*

THE DEADLINE FOR  
 SUBMITTING ARTICLES FOR  
 PUBLICATION IS THE 15<sup>TH</sup>  
 OF THE PRECEDING MONTH.

### 2004 SEMARA OFFICERS

#### *President*

Donald Manley, N1PMB

#### *Vice President*

Charles Moszczenski, KB1FRL

#### *Secretary*

Ronald Silvia, WB1HGA

#### *Treasurer*

Scott Szala, W1EV

#### *Board of Directors:*

Ray Arruda, KB1EVX

David Dean, K1JGV

Marty Jordon, KA1YFV

#### *Trustees: (year term is up)*

Edward Blouin, KA1AW (2004) - Ch.

Norman Riley, W1ATI (2005)

Andrew Reuter, WA1FNM (2006)

William Miller, Jr., K1IBR (2007)

Larry Houbre, Jr., AA1FS (2008)

#### *WEBSITE:*

<http://www.semara.org>

#### *E-MAIL:*

[clubinfo@semara.org](mailto:clubinfo@semara.org)

#### *FISTS CW*

club no. is 10555

*GPS Coordinates:*

Lat. N 41° 36.795'

Long. W 070° 56.590'

# IT SEEMS TO ME ...

**W**e were remarkably fortunate in August. You may not have noticed but ARES was quite active at the SEMARA clubhouse for Hurricane *Alex*, Tropical Storm *Bonnie* and Hurricane *Charley*. Most of the credit goes to **Rob, KD1CY**, and **Tony, N1XRS**, who spear headed the operations. Fortunately, they did have some help. Special thanks go to **Art, W1AEI**, **Mike, KB1NB**, **Byron, K1YCQ**, *et alia* for monitoring with Rob during this first ever *Voice Over IP* Activation for a Hurricane done in the Eastern Massachusetts ARES section and the subsequent call-ups.

With the DNC ongoing and the threat for isolated severe weather and flash flooding for the region on Wednesday, July 28, and the nomination of Kerry as Democratic nominee to take place on Thursday, July 29, SEMARA ARES was activated and the SEMARA Club station was used on Wednesday and Thursday from roughly 2 p.m. until 10:00 p.m. SEMARA acted as Net Control support for HF and the VoIP New England Network. Thanks go to **Rob, KD1CY**, **Tony, N1XRS**, as well as **Art, W1AEI**, **Byron, K1YCQ**, **Brian, KB1FYS**, **Delilah, KB1IQC**, and others.

Please forgive me if I missed you—it is just a sign of old age.

**N**ew technology seems to go nicely with the old. We had a great time with the first Fox Hunt in a long time in July. This month we will try to put into practice what we learned in the August Tech Talk about *GPS Devices*. In place of the September Tech Talk, we will have a *GPS 'Fox Hunt.'* This combines Radio and Geocaching skills.

Perhaps someday we will be able to combine several amateur radio skill into a kind of Olympic event similar to the *Triathlon*, with different skills needed for the different events. Just think about it, the Olympic Games started out testing skills that were useful for battle. Let's put together skills that are useful for *Safety, Search, Rescue*, and such.

That's not such an outlandish idea, is it!

Just hamming around...

*73 de Bob, K1KVV*

## HAMMING AROUND

**G1B02\* If the FCC Rules DO NOT specifically cover a situation, how must you operate your amateur station?**

- In accordance with standard licensee operator principles
- In accordance with good engineering and good amateur practice
- In accordance with station operating practices adopted by the VECs
- In accordance with procedures set forth by the International Amateur Radio Union

\* From the Amateur General Class (Element 3) Question Pool

ANSWER - See page 7



# MEETING MINUTES

The August 5, 2004 Business Meeting was called to order at 7:00 p.m. by the President, **Donald Manley, N1PMB**. A quorum of 40 members was present.

The Secretary's report (**Ron Silvia, WB1HGA**) as it appeared in the July issue of *Zero Beat* accepted, as well as the Minutes for the BOD meeting.

The Treasurer's report (**Scott Szala, W1EV**)—Accepted as read.

## STANDING COMMITTEE REPORTS

*Buildings and Grounds* (**Andy Reuter, WA1FNM**)—reminder that the boiler needs to be serviced.

*Communications* (**Charles Moszczenski, KB1FRL**)—Two Thank You cards received: from **Ray Dickinson, N1BBJ** for the nice membership packet; and from **Brian Freeman, N1LFE**. A request from Universal Electronics for radio technicians was passed on .

*Technical* (**Tony Duarte, N1XRS**)—New antenna, transceiver and amp is up.

## SPECIAL COMMITTEE REPORTS

*Scholarship* (**Larry Houbre, Jr., AA1FS**)—None.

*Internet* (**Larry Houbre, Jr., AA1FS**)—None.

*Activities* (**Scott Szala, W1EV**)—Tickets will go on sale at 6:00 p.m. on September 2, the next club meeting. for the September 18, 2004 Chicken BBQ. The tickets cost \$5.00 per person. The usual rules apply to all members for the purchase of tickets for this event.

*Fleamarket* (**Ray Arruda, KB1EVX & Andy Reuter, WA1FNM**)—List of jobs still open for members to sign up for is on the bulletin board. Also explained that sellers of club property cannot buy and those who volunteer to help get in free.

*ARES* (**Rob Macedo, KD1CY & Tony Duarte, N1XRS**)—Rob expressed his thanks for those who volunteered for the DNC exercise. The VoIP Hurricane Exercise was also a success. A Communications Workshop is scheduled at the club for August 28, 2004. A Chicken BBQ will be served to those who sign up for the workshop.

*Ratifications*—Three applications for membership were voted life members (see page 4 for details).

*President's Comments* (**Donald Manley, N1PMB**)—Thanks to all who were involved in the actual labor of mounting the antenna mounts and the club antennas on the cell tower.

Thanks to **Maryan Midurski, W1EKW** for the equipment donated to the radio club.

Looking for a Contest Chairperson to head contest activities for the club station.

*Minutes of the BOD Meeting*—After discussion, the Board recommends that:

1. Club should run an auction and that the club equipment left over from the Fleamarket be sold at auction.
2. Club should keep the Kenwood 530 as a station back-up.

*Old Business*—None.

*New Business*—

*Passed*: \* Motion to keep the Kenwood 530 as a station back-up.

*Passed*: \* Motion to purchase N3FJP Logging Software for the club station computer for \$49.00.

*FOR THE GOOD OF THE CLUB*—The cost of the antenna mounts, \$1200, was waived by Netcom.

The meeting adjourned at 7:30 p.m.

Submitted by **Ron Silvia, WB1HGA**, Secretary

\* All motions accepted and passed by the members





# CLUB NOTES

September is usually a transition month with Labor Day signaling the end of summer and the beginning of the fall routine. Fall officially begins on the 22<sup>nd</sup>, yet the weather is still pleasant enough for outdoor activities.

Meanwhile, enjoy the daylight while it lasts—look forward to the bounty of the season.



Three applicants were voted life members of the club during the August 5, 2004 business meeting:

**Norman Jacques, N1TLF,**

**Brian Freeman, N1LFE,**

**Peter L. Piana, no call.**

The club membership is now 272.

At the VE Exam on August 7, **Andrew J. Stenberg, KA1KWE** from E. Greenwich, RI passed his Extra class written exam.

**Mr. Raymond Lapalme** of Florida donated two bags of very old tubes to the club. They used to belong to his dad, and are all in their original boxes. Ray was in the area and when cleaning out his dad's cellar he came across the tubes.

Ray used to work for the local phone company and remembered that **Ray Arruda, KB1EVX** and **Pete Ryder, KB1GPL** were involved in radio work. The rest is history...

*Thanks, Ray, for this great donation.*



**Way to go!**

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## SEMARA EVENT CALENDAR

### September 2004

2—**Business Meeting**, 7:00 p.m.

9—Ragchewing, 6:30 p.m.

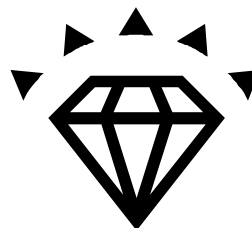
16—Replaced Tech Talk “GPS ‘Fox Hunt’,”

**Carl Bredberg, K1KID** 7:00 p.m.

23—Ragchewing, 6:30 p.m.

30—ZERO BEAT **folding party**, 4:00 p.m.

Ragchew at the clubhouse every Sunday at 7 - 11 a.m.  
Drop by and enjoy a cup of coffee and donuts!



### ENGAGED

JENNIFER GEBO AND TONY DUARTE

**E**ngaged – Jennifer M. Gebo of Athol, MA and Antone D Duarte Jr (**N1XRS**) of Dartmouth, have announced their engagement. She is daughter of Donna Ostrom of Athol and Michael Gebo of Rindge, NH, and will graduate from Athol High School in 2005 and will attend college in the fall of 2005. Her fiancé, son of Linda and Antone D Duarte Sr. of Dartmouth, is a graduate of Greater New Bedford Regional Vocational Tech High School, and he received his associates degree in engineering technology from Bristol Community College. A wedding is planned for the summer of 2005.

# SEMARA News & Notes

## Behind the Call Sign Building the Z11 Kit



MATT CARREIRO AND RICARDO CHAVES, CU2JU

### VISITOR FROM THE AZORES ISLANDS

**R**icardo Chaves, CU2JU, from Sao Miguel Island and his nephew Matt Carreiro from New Bedford stopped by the clubhouse during the Zero Beat folding party on July 29. He was here until August 12 and is interested in getting Matt into Amateur Radio.

Ricardo was first licensed in 1999 as CU2AAV and recently upgraded to CU2JU by passing a CW test. He currently works 80-, 40-, 17-, 12-, and 10-m with an IC-707 and an IC-706MkIIG. His antennas include a vertical and a dipole. He operates SSB, PSK31 and soon CW. His favorite band for DX is 17-m. Look for him when the propagation is good.

He also enjoys using EchoLink to talk with his relatives back here in the New Bedford area.

Meanwhile, Matt is studying for the Technician class license. He would probably benefit from having an Elmer—if you would like to help Matt, get in touch with me for his contact information.



**R**egarding editing mistakes, we put at least one error in every issue — just to see if you are paying attention.

Bob-K1KVV, Editor

By Ron Silvia, WB1HGA

I always wanted an auto tuner in the station. I checked out and bought the LDG Z-11 kit because I can use it with battery power or at the home station. It's small, lightweight and easy to use.



Z-11 WITHOUT COVER

I ordered the kit. When the package arrived, I took a component count and examined all the documentation. My first surprise was the *toroids* come already wound! That saved me some “kitting time.” I was able to follow the clear instructions. It has lots of color pictures providing views of the assembly to help you “populate” the main board. The kit took me only an afternoon and evening to complete.

The alignment is really simple and done with a voltmeter and a dummy load/wattmeter. The only problem I had during assembly was mounting the front panel to the control panel.

I did have an issue trying to adjust the readings and sent the Z-11 back to LDG to determine the problem. The tuner returned with a new EPROM version and the unit aligned.

**H**ow did it work? I have a Carolina Windom about 25 feet up. I was able to tune 40-m across the band. 20-m gave the same results. Great! I also tuned 15- and 10-m with the same results. Wow! 80-m gave limited results. I had to manually tune to get a satisfactory reading; auto-tune worked for only a small portion of the band. I tried a balanced feedline for 20-m with satisfaction using an (optional) 4:1 balun from LDG.

The tuner is noisy when all the relays are working to find the best match. The time to find the minimum SWR takes less than a few seconds. You can tell the tuner is working by the LED's and the SWR resading.

For portable use, I power the Z-11 with two 9-V batteries in series.



WB1HGA'S SETUP

# August Tech Talk on "GPS Devices"

The presentation on *GPS Devices* was given by **Matt Vangel, KA1THM**. He provided three generous handouts to the 15 or so attendees: *GPS GUIDE for beginners*, *GPS Overview*, and *GPS Operations and Training*. First of all, GPS is an acronym for Global Positioning System. GPS uses a network of satellites that continuously transmit coded information that is used to precisely locate positions on earth by measuring the distance from the satellites.



MATT, KA1THM

GPS consists of three segments: Space, Control, and User. The *space segment* consists of at least 24 satellites at about 12,000 miles up. The satellites transmit signals on several frequencies at 20-50 W. Civilian GPS receivers listen on the L1 frequency of 1575.42 MHz. L1 contains two pseudorandom (noise-like) signals: the Protected P-code and the Coarse/Acquisition C/A-code. Each satellite transmits a unique code. The P-code is scrambled to prevent "anti-spoofing." These signals allow the Time of Arrival to be measured. When multiplied by the speed of light, this gives the distance from the satellite. The Navigation Message contains the satellite orbit and clock information as well as atmospheric delay information. The signals are timed using atomic clocks accurate to 1 nanosecond (1 part in a trillion).

The *control segment* tracks each satellite and provides them with corrected orbital and clock information. The *user segment* consists of you and your GPS receiver. Your receiver hears all the signals at once, anywhere from 4 to 14 satellites at a time. 3 satellites can give a 2-D position, that is latitude and longitude. The more satellites the better. The circular radius of uncertainty (error) can be anywhere from 80 to 9 feet, depending on conditions.

Because GPS uses UHF, you get better reception when outdoors in the clear. To take advantage of your past signal history, you should move at about 5 MPH. This takes advantage of differential measurements that can provide more precise readings to get to a 9 foot error radius.

*Wide Area Augmentation System* or WAAS refers to a network of 25 ground reference stations that cover the entire U.S. and some of Canada and

Mexico. WAAS capable receivers typically have accuracies of 3-5 meters horizontally and 3-7 meters in altitude.

Matt emphasized both the limitations of GPS devices and how they can be used. The limitations have already been given above. To give us a chance to appreciate their uses, he distributed a bagful of GPS devices to the attendees. Most got to use a Garmin G-12 GPS device.



G-12 GPS  
DEVICE

First he gave us a brief introduction in using the device. Then he had us enter four search coordinates:

1. Lat. N 41° 36.808' / Long. W 070° 56.555'
2. Lat. N 41° 36.803' / Long. W 070° 56.570'
3. Lat. N 41° 36.793' / Long. W 070° 56.592'
4. Lat. N 41° 36.782' / Long. W 070° 56.537'



STUDENTS USING A G-12

We all went outside and the fun began! We had to first acquire our initial position before we could search for the flags placed at each of the first three coordinates.

The fourth coordinate was different. To provide a *real* incentive, **Carl Bredberg, K1KID**, hid a dollar bill in a white cup—after all, it was getting dark.

I don't know who was the first to find the white cup. All I know is, it was too late when I got there. Matt did get all of his GPS devices back. This was so much fun that there will be a *GPS 'Fox Hunt'* in place of the Tech Talk this month. Come on out.

73 de Bob Kelley, K1KVV

## UPDATES

Thanks to **Rick, W1RJG**, for providing me with updates concerning repeater and simplex EchoLink information.

Please give me updates, corrections, and additions as you notice them.

**Bob, K1KVV**—[editor@semara.org](mailto:editor@semara.org)

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**Members' SIMPLEX\* EchoLink Nodes**  
**CALL FREQ PL NODE**

WB1HGA	SIMPLEX	147.440	71.9	2061
N1XRS	DOWN	146.595	141.3	8998

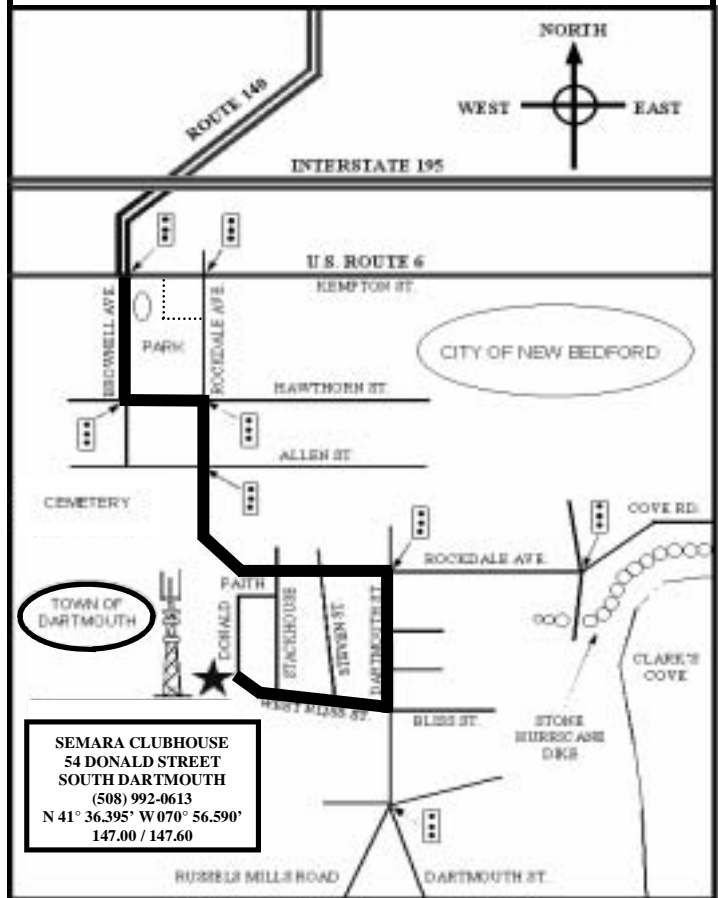
Send updates to: editor@semara.org

\*Repeater nodes: see page 8.

**September**  
**VE SESSIONS**

- 9 Providence, RI, 7:00 p.m.**  
Judy Nelson, KC1RI  
401-231-9156
- 11 Falmouth, MA, 9:00 a.m.**  
Joanne Reid, N1LNE  
508-548-1121
- 18 W. Warwick, RI, 9:00 a.m.**  
Tom Senerchia, WA1VAY  
401-822-2592
- 20 Fall River, MA, 7:00 p.m.**  
Skip Denault, KB1CNB  
774-644-3469
- 25 Middletown, RI, 9:00 a.m.**  
Jack Garforth, N1JK  
401-683-2250

**Directions to SEMARA**



**SEMARA CLUBHOUSE**  
54 DONALD STREET  
SOUTH DARTMOUTH  
(508) 992-0613  
N 41° 36.395' W 070° 56.590'  
147.00 / 147.60

**POINT TO PONDER**

**G**ood people do not need laws to tell them to act responsibly, while bad people will find a way around the laws.

— Plato (427-347 B.C.)

**B. In accordance with good engineering and good amateur practice**

# SEMARA NET DIRECTORY

--- RAGCHEW ---

Sat - 8 p.m. 28.700 USB  
 Sun - 8 a.m. 28.700 USB  
 Daily - 7 p.m. 147.000+  
 M-F 7:30 a.m. 3.872 LSB

**443.800+ Sunday Activities**

7 p.m. - New England Net  
 9 p.m. - ARRL News + Newslite  
**FAIRHAVEN WEATHER NET**  
 Mon--Fri 8:00 p.m. 145.490-

**Sept. 12 - FLEAMARKET -7 a.m. to noon**

# NEXT SEMARA VE SESSION

**OCTOBER 2, 2004**

**10:30 A.M. @ CLUBHOUSE**  
**LARRY HOUBRE, JR., AA1FS**  
**508-991-6055**

## LOCAL REPEATER DIRECTORY

Frequency	CTCSS	Call	Location	Frequency	CTCSS	Call	Location
<b>144</b>				<b>440</b>			
145.150 -	123.0	WA1DGW	Fall River	441.400 +	100.0	WG1U	Plymouth
145.490 -	82.5	KD1CY*	Fairhaven	443.450 +	88.5	K1MYL	Westport
146.655 -	88.5	WA1GPO	Falmouth	443.500 +	141.3	K1PBO	Barnstable
146.685 -		W1LM	Plymouth	443.600 +	88.5	NS1N	Norwell
146.700 -		K1CR	Cranston, RI	443.800 +	88.5	W1RJC*	Dartmouth
146.730 -	67.0	W1SGL	Sandwich	444.200 +	118.8	N1YHS	Bourne
146.760 -		W1HQV	Scituate, RI	444.250 +	141.3	WA1GPO	Falmouth
146.955 -	88.5	K1PBO	Dennis	444.350 +	88.5	W1ACT	Fall River
147.000 + SEMARA	67.0	W1AEC	Dartmouth	444.550 +	88.5	W1MV	Bridgewater
147.135 +	67.0	KA1GG	Taunton	447.025 -	77.0	N1JBC	Johnston, RI
147.180 +	67.0	W1MV	Bridgewater	447.075 -	88.5	N1DZD	Kingston
147.345 +	88.5	KB1QL	Vineyard				
		* Nodes: IRLP=4617, EchoLink=4611				* Nodes: IRLP =4259, EchoLink=4259	

*Southeastern Massachusetts Amateur Radio Association, Inc.*  
 54 Donald Street, South Dartmouth, MA 02748

**SEMARA**

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