



# ZERO BEAT

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



OUR 68th YEAR

Volume 36, Issue 7

SEMARA W1AEC

July 2000

## SINDRE TORP, LA6OP DRAKE RADIO COLLECTOR

Sindre Torp, LA6OP, of Helligvaer, Norway was a featured speaker at the 1999 and 2000 Drake Forums presented at the Dayton Hamvention. He has over 200 Drake radios in his collection!

The oldest piece of Drake equipment in his collection is a 1944 low-pass military filter type F-15/U that was donated to his collection in 1999 by Bill Rovas, WA1APX, in the name of our club. (The full story appeared in the January 2000 issue of ZERO BEAT.) Sindre included a picture of the filter in a brochure he made for distribution at Dayton. A signed copy of the brochure was donated to the club by Sindre, via Ed Rovas, WA1VXY.

A photocopy of the brochure is posted on the club bulletin board for all members to review. Sindre's collection is nothing short of impressive! It demonstrates a dedication to collecting that few people ever attain.

Sindre is in the process of writing a book about Drake equipment. It will include pictures of all equipment in his collection.

Sindre is looking for Drake equipment to add to his collection. His "want list" is reproduced to the right. If you have (or know the location of) any items listed, please contact Sindre at:

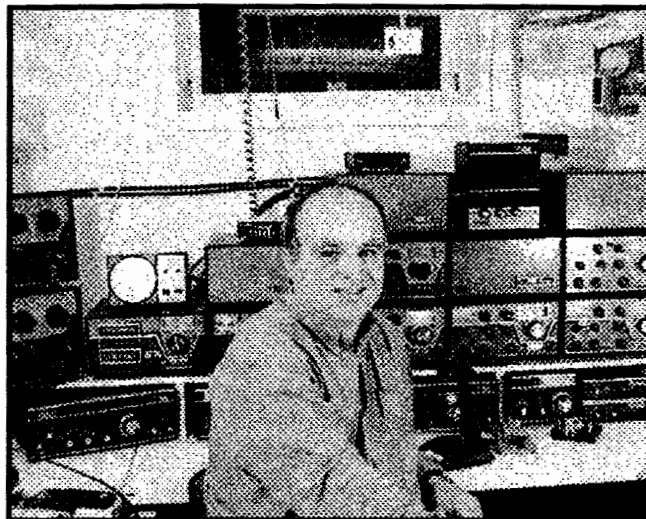


EMAIL: [sindtorp@online.no](mailto:sindtorp@online.no)



SNAIL MAIL:

Sindre Torp  
NO-8095 Helligvaer  
Norway



### DRAKE EQUIPMENT WANTED

Updated 20 May 2000

- \* 4-LF Low Frequency Converter
- \* AN-5 Antenna Kit
- \* HPF 100 High Pass Filter, attenuates 0-52MHz
- \* IN-4 DC to DC Inverter (NOT the IN-4B)
- \* LN-5 "Inductube" AC Power Line Filter
- \* MMK-33 Mobile Mounting Kit for TR-33C
- \* MN77 Matching Network
- \* MN4438 Matching Network
- \* MN4439 Matching Network
- \* MODEL 505A Power Rectifier Unit for transmitter AN/ART-13A
- \* MODEL 522 Power Rectifier Unit
- \* MODEL 579-60 Low Pass Filter, 67MHz cutoff
- \* MODEL 587 Audio Band Pass Filter for use betw. mic and tx
- \* MR-3 Communications Receiver, 19" wide
- \* MSR-1 Communications Receiver, 19" wide
- \* R77 Communications Receiver, 19" wide
- \* R77-SM Communications Receiver, 19" wide
- \* SPEAKER Matching Speaker for the 1-A receiver
- \* THETA 550 Communication Terminal (receive only)
- \* TR77 Communications Transceiver, 19" wide
- \* TR-V Marine VHF Transceiver
- \* TV-300-FMT Band Rejection Filter 88-108MHz
- \* TV-300-10HW Half-Wave Harmonic Filter
- \* TV-300-15HW Half-Wave Harmonic Filter
- \* TV-300-45T Band Rejector, adjustable 40-46MHz
- \* UHF-300-HP High Pass Filter

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**Southeastern Massachusetts  
 Amateur Radio Association, Inc.**  
 54 Donald Street,  
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**ADVERTISING**

**Commercial ads** the size of a business card will be accepted. Rates are \$5.00 for one insertion, \$20.00 for six insertions, and \$35.00 for twelve insertions.

**Non-commercial ads** up to forty words in length will be accepted. Rate is \$3.00 for one or \$12.00 for six insertions. Club members have one free non-commercial ad per month.

\*\*\*\*\*  
 THE DEADLINE FOR  
 SUBMITTING ARTICLES FOR  
 PUBLICATION IS THE 15TH  
 OF THE PRECEDING MONTH.

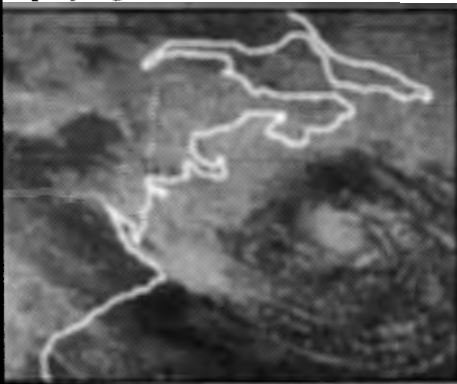
## "THE PERFECT STORM" July Tech-Talk Topic

**I**t will be movie night again at the clubhouse! Bob Metivier, N1XZJ, will be running a video of "The Perfect Storm." This is a follow-up to his excellent presentation in June on "The Weather and You."

Plenty of hot buttered popcorn and donuts will be available, along with coffee, tea, and soda. If the last movie night was any indication, we shall be going through two pounds of butter! After all, popcorn just isn't right without butter...

Bob will talk briefly about the storm and answer any questions about the event following the video presentation.

Shown below is a satellite image of the "Perfect Storm." The storm was the subject of a book and also a movie now playing in local theaters.



## NEXT SEMARA VE SESSION

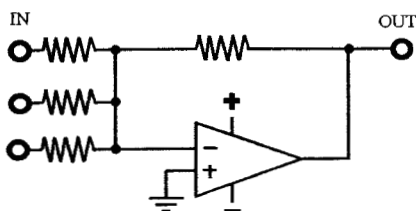
August 5, 2000  
 10:30 am  
 SEMARA Clubhouse

## LOCAL VE SESSIONS IN JULY

- 08 Falmouth, MA**  
 Ben Fleck  
 508-540-2583
- 10 Brookline, MA**  
 Bob Wondolowski  
 508-865-5822
- 13 Providence, RI**  
 Judy Nelson  
 401-231-9156
- 19 Cambridge, MA**  
 Nick Alterndbernd  
 617-253-3776



## NAME THAT CIRCUIT



- 1.) Signal Mixer
- 2.) 3 Phase Amplifier
- 3.) Missing Pulse Detector
- 4.) Tone Generator
- 5.) SSB Detector

ANSWER - See page 7

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*"The more corrupt the state,  
 The more it legislates."*

**Tacitus**



# CLUB NOTES

**J**uly! Fireworks, cook-outs, beach parties - it doesn't get any better than this! The big and only holiday this month is Independence Day on Tuesday, July 4th. Get that grill cleaned and ready for the weekend parties!



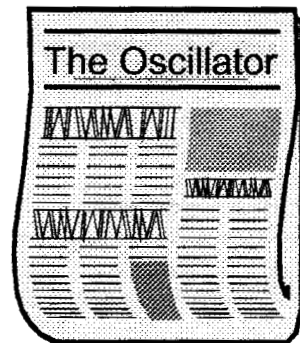
**A** big *WELCOME* goes out to new member **John Rocha, N1YNP**, of Fall River, MA. John is known on the airwaves as "Sam" and frequents 2 meters and 440. *Welcome to the club, Sam!*

**WELCOME TO THE CLUB!**

**T**he club rest rooms now have brand new toilet seats thanks to the efforts of **Andy Reuter, WA1FNM**. The membership approved the purchase at the June business meeting and Andy installed the new seats on June 5th. While he was at it, Andy also cleaned the rest rooms and the rest of the club. When Andy gets rolling there is no stopping him. *Thanks, Andy!*



**T**he Barnstable Amateur Radio Club has joined our newsletter exchange program. Their newsletter "*The Oscillator*" is posted on the club bulletin board for your reading enjoyment. Their newsletter is published bi-monthly by Jim Robertson, K1ZJW.



**H**enry W. Deslaurier, WA1CQJ, 69, died Sunday May 28, 2000. Henry was a club member since 1976. Henry was founder of the International Association of Airline Hams, having worked for both Pan Am and National Airlines. He also worked as a pier manager for Royal Caribbean Cruises in Fort Lauderdale, FL. *Rest in Peace, Henry.*

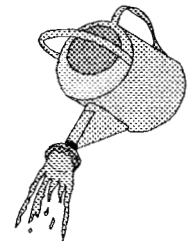


**M**embers are reminded to renew their ARRL membership through the club. The club gets a small portion of the renewal fee. Contact the club Treasurer **John Carreiro, W1ZYV**, for full details. E-Mail John at:

w1zyv@bigfoot.com



**A** "Tip o' The Hat" goes out to **Dick Houghton, KA1YVI**, who spent three hours watering the new grass on Friday, June 9th. *Thanks, Dick!*



**R**ick Cabral's son **Richard J. Cabral** has a new call. He is now **W1RJC**. This is his third and final call we are told. His previous calls were **KA1YZE** and **N1RFH**.



**T**he June 15th Tech Talk on weather by **Bob Metivier, N1XZJ**, was enjoyed by all. *Thanks, Bob*, for the interesting lecture!





# INTERNATIONAL LIGHTHOUSE/LIGHTSHIP WEEKEND SCHEDULED FOR AUGUST 19/20

This year's International Lighthouse/Lightship Weekend is scheduled from 0001 UTC on Saturday August 19th through 2359 UTC on Sunday August 20th. Last year 218 amateur radio stations were setup in lighthouses and lightships in 39 different countries around the world!

## INTERNATIONAL LIGHTHOUSE/LIGHTSHIP WEEKEND

### OPERATING FREQUENCIES

#### **CW Operations:**

80 meters – 3.510-3.540 (3.521±)  
 40 meters – 7.005-7.035 (7.021±)  
 20 meters – 14.010-14.040 (14.021±)  
 15 meters – 21.010-21.040 (21.021±)  
 10 meters – 28.010-28.040 (28.021±)

#### **Phone Operations:**

80 meters – 3.650-3.750 (3.721±)  
 40 meters – 7.040-7.100 (7.221±)  
 20 meters – 14.125-14.275 (14.221±)  
 15 meters – 21.150-21.250 (21.321±)  
 10 meters – 28.300-28.400 (28.351±)

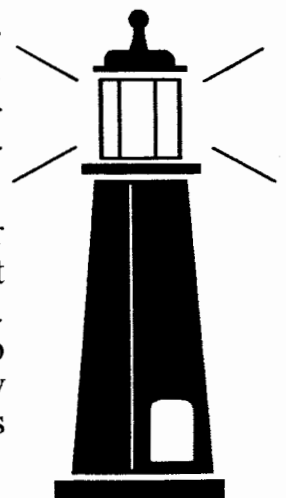
Please note that the 80 and 40 meter frequencies are for European stations. All others can use any authorized frequencies. Stations participating in the event should use "lighthouse" or "lightship" at the end of their call, or "LGT" if working the event on CW.

This annual event is NOT A CONTEST. The event is used to obtain media exposure for our hobby. The event stresses the international aspect of both lighthouses/lightships and amateur radio. Who knows, it might even be the catalyst that brings more people into the hobby!

Each participant, whether at a lighthouse/lightship or at a home QTH, decides how they will operate their station. They chose which of the 5 classic bands they shall transmit on, what mode of operation to employ, what type of antennas to use, how much power to transmit, and what hours they will spent operating. This is a FUN event with no special restrictions imposed on the participants.

This event takes place on the 5 classic bands - 10, 15, 20, 40, and 80 meters. The event section of each band is used, as outlined in the chart on this page. Participants are urged to use the center frequency only as a last resort when working stations. After all, if everyone transmitted on that one frequency chaos would reign!

So mark your calendar for this special event that will promote amateur radio. Work a few stations, or go for broke and work as many as possible. The choice is yours. Have some FUN!





# MEETING MINUTES

The June business meeting was called to order at 7:05 pm by President Chris Smith, K1CJS. Forty (!) members were present. Following the salute to the flag and roll call, the Secretary's and Treasurer's reports were read and accepted.

The minutes of the Board of Directors meeting were read. The board recommended not buying the 146.49 repeater as offered to the club by Marc Jodoin for \$2,500. The Board also recommended no action on Morgado trucks driving across our land as a fence is planned in the future.

Committee reports followed: *Technical* - Receiver aligned to stop 147.57 simplex from getting into the machine. Work being done on cavities to improve system. *Activities* - No report. *Buildings and Grounds* - Oil tank topped off with low-cost oil. Al Costello of NET-COM thanked for loam and stone dust donated to club.

*Ham Class* - No report. *Scholarship* - No report. *Constitution* - Still under review. *Tower* - Jumper at 2 meter antenna replaced because of suspected defect in old cable.

*Communications* - Club member Henry Deslaurier, WA1CQJ, passed away D Sunday, May 28th. Members signed a sympathy card to be sent to his family.

*Ratifications* - **John Rocha, N1YNP**, voted into membership. John is known on the air as "Sam."

*Old Business* - Card lock system still being worked on. **Steve Spulock, N1DSN**, donated several boxes of coaxial cable, wire, and radio parts to the club. They were auctioned off after the meeting and brought in \$51.25 to the club. Thanks, Steve, for the donation.

*New Business* - The following motions were made and passed:

- 1) Motion to upgrade Ed

**Baker, K1BKR**, to life member.

- 2) Motion to buy new toilet seats and cleaning brushes for the club rest rooms.
- 3) Motion to pay for grass seed used to plant club lawn.
- 4) Motion to buy wood sealer/protector for club porches.
- 5) Motion to buy various coaxial connectors required for repeater upgrade in near future.

*Good of the Club* - It was suggested that a list of priority projects planned by the club be posted on the bulletin board.

Following the meeting, in addition to the radio parts auction, the club's old, condemned riding mower was auctioned off for \$10 TO Andy Reuter.



## GRASS SEED PLANTED

Shown raking in the grass seed are Bill Vincent, W1POW; Chris Smith, K1CJS; Henry Blanchett, W1GYL; Andy Reuter, WA1FNM; Dave Dean, K1JVG; Alan Dulong, WB1FQP; and Ray Arruda, KB1EVX. Actually, Bill Vincent is sweeping dirt off a man-hole cover. (Didn't want you to think he planted grass with a broom! But, then again...)



# BILL MILLER WINS FOXHUNT



The June 8th foxhunt was terrific! **Charlie Days, WA1JFD**, was the fox. He hid in the alleyway behind the old Sid Wainer Fruit store. His car was up against a huge metal dumpster, and he was situated between the store and the hurricane dike near the big steel doors (giant RF reflectors!) on Cove Road.

Talk about signal reflections! His strategic location raised heck with direction finders. False directional readings were everywhere. Of course there were true readings too, but with so many false readings it

was difficult to "sort the wheat from the chaff."

On top of this, Charlie ran low power. Hunters often found themselves out of range and had to backtrack now and then. Charlie was snug as a bug in a rug, so to speak.

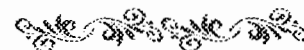
Finally, after driving by Charlie two times, **Bill Miller, K1IBR**, finally tasted victory when he spotted Charlie's hideaway. Shortly thereafter **Tim Smith, N1BTQ**, nailed the fox too. Both Bill and Tim use "Doppler" directional finders. Bill's unit is a homebrewed design, while Tim uses a Ramsey

Electronics unit made from a kit.

The dream team of Bob & Henry (**Bob Metivier, N1XZJ**, and **Henry Blanchett, W1GYL**) came in third after Charlie bombarded the airways with "clues."

Last, but not least, was **Chris Smith, K1CJS**, who was very frustrated by the hunt. He had a very bad day.

As usual, following the hunt everyone went to Me & Ed's restaurant for a bite to eat and some ragchewing.



## FALL RIVER ARC TO HOLD FIELD DAY IN STATE FOREST

### SEMARA MEMBERS INVITED TO JOIN IN THE FUN

As you know, SEMARA will not be holding a Field Day this year. However, the Fall River Amateur Radio Club / Bristol County Repeater Association will be setting up shop for Field Day in the Freetown State Forest. They are inviting members of our club to join in the fun.

Plans call for setup to start on Saturday morning between 10 and 11 am with actual operation to commence at 2 pm in the afternoon. Then the next 24 hours will be spent working the world, with operations ending at 2 pm Sunday afternoon.

If you are interested in participating in this event, please notify Chris Smith, K1CJS, and he will inform the Field Day committee chairman. Feel free to drop by and just see the action too.

# FIELD DAY 2000



### LIGHTENING HITS TOWER

On Wednesday, May 24, 2000, the NETCOM communications tower behind the clubhouse was hit by lightning. The interface panel on our repeater that connects the control cable from the clubhouse to the repeater suffered only a blown fuse, while the NEXTEL cellular building had the T1 data line knocked out of service.

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Hay & Custom Work

### TECHNICAL TIPS

When working with coaxial cable phasing harnesses, the velocity factor of the cable is multiplied times the free space length of a quarter wavelength to determine the final physical length of cable required. This method works well for the lower ham bands, but for serious VHF and UHF use, a more exact method is required. One method is to calculate the length of a quarter wavelength of coaxial cable using the velocity factor. Cut a piece of cable a bit longer than calculated. Short one end out (center conductor to shield) with a piece of copper braid or copper sheet stock. Check the resonant frequency of the cable with a grid dip meter coupled to the shorted end. Read the frequency with a frequency counter. Carefully cut small sections off the open end of the cable until the desired frequency is reached. Put on connectors and the matching section is complete. Works every time!

### 2000 FLEAMARKETS

July 16 - MIT Cambridge, MA  
 Aug 28 - MIT Cambridge, MA  
 Aug 26, 27 - Boxboro, MA  
**Sept 10 - SEMARA!**  
 Sept 16 - Forestdale, RI  
 Sept 17 - MIT Cambridge, MA  
 Oct 6, 7 - Rochester, NH  
 Oct 8 - Wallingford, CT  
 Oct 15 - MIT Cambridge, MA  
 Nov 4 - Londonderry, NH  
 Nov 5 - Framingham, MA  
 Nov 18 - Newton, MA

### NET DIRECTORY

— Sunday —  
 8 am 28.375 SEMARA NET  
 9:30 am 50.225 Yankee SSB  
 7 pm 147.000+ Swap Net

— 4th Sunday —  
 9 pm 449.575 EM-ARRL

— Daily —  
 5:30 pm 3.915 EM/RI NTS ssb  
 7&10 pm 3.658 EM/RI NTS cw  
 6:45 pm 147.315+ NTS/Trivia  
 7 pm 146.550 SEMARA NET  
 8 pm 145.230- EM-NTS

— Monday to Friday —  
 7:30 am 14.262 SEMARA NET  
 8 pm 145.490- Weather

— Thursday —  
 8 pm 147.180+ Trivia

— Saturday —  
 1800G 14.300 Coast Guard

— SEMCARES NET —  
 1st Sunday of the month at 7:30 pm  
 145.490- (Fairhaven Repeater)

### VISIT THE SEMARA WEBSITE

WWW.LRH.NET/SEMARA/SEMARA.HTM

SEND E-MAIL TO: W1AEC@ARRL.NET

### "NAME THAT CIRCUIT" ANSWER

1.) Signal Mixer

### SEMARA OFFICERS

2000

*President* Chris J. Smith, K1CJS  
*Vice-President* Robert Metivier, N1XZJ  
*Secretary* Henry Blanchett, W1GYL  
*Treasurer* John Carreiro, W1ZYV

**Board of Directors:**

Martin Jordan, KA1YFV  
 William Miller Jr., K11BR  
 Scott Szala, W1EV

**Trustees:**

Norman Riley, WIATI - Chairman  
 Frank Fonseca, WBIASD  
 Martin Jordan, KA1YFV  
 William Vincent, W1POW  
 Edward Blouin, KA1AW

### SEMARA EVENT CALENDAR

#### JULY 2000

6 - Business Meeting, 7:00 pm  
 13 - 2 Meter Foxhunt @ clubhouse, 7:00 pm  
 20 - Tech-Talk, "The Perfect Storm"  
 courtesy of "Bob Metivier, N1XZJ"  
 \*\*\*\*\*1 HOUR MOVIE\*\*\*\*\*  
 POPCORN WILL BE SERVED



#### AUGUST 2000

3 - Business Meeting, 7:00 pm  
 5 - VE Session, 10:30 am  
 10 - 2 Meter Foxhunt @ clubhouse,  
 7:00 pm  
 17 - Tech-Talk, "To Be Announced"  
 by "Mystery Man"

# SEMARA

Coffee Hour at the clubhouse every Sunday at 9:00 am. Drop by and ragchew!

## LOCAL REPEATER DIRECTORY

Frequency	CTCSS	Call	Location	Frequency	CTCSS	Call	Location
<b>144</b>				<b>440</b>			
145.150 -	123.0	WAIDGW	Fall River	441.400 +	192.8	WGIU	Assonet
145.490 -		KA1WBF	Fairhaven	442.200 +	88.5	N1NRL	Fall River
146.445 +1Mhz	91.5	KB1BWN	Dartmouth	442.350 +		N1OFD	Acushnet
146.655 -	88.5	WAIGPO	Falmouth	442.600 +	100.0	K1LIQ	Tiverton, RI
146.685 -		WILM	Plymouth	443.450 +	88.5	K1MYL	Westport
146.955 -	88.5	K1PBO	Dennis	443.500 +	141.3	K1PBO	Barnstable
147.000 +	67.0	W1AEC	Dartmouth	443.600 +		NS1N	Norwell
147.045 +		WA1AIC	Dennis	443.800 +	88.5	N1RFH	Dartmouth
147.135 +	67.0	ND1N	Taunton	444.200 +	118.8	N1YHS	Bourne
147.180 +	67.0	W1MV	Bridgewater	443.850 +	131.8	W1ARM	Chatham
147.315 +	156.7	N1BBT	Wareham	444.250 +	141.3	WAIGPO	Falmouth
<b>220</b>				444.350 +	88.5	W1ACT	Fall River
224.340 -		K1KEK	Dennis	444.550 +	88.5	W1MV	Bridgewater
224.840 -	100.0	K1LIQ	Tiverton, RI	447.075 -	88.5	N1DZD	Kingston

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**FIRST CLASS**

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