

ZERO BEAT

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SEMARA, W1AEC
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South Dartmouth, MA 02748

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Meeting Highlights

Here are the highlights from the January 6th SEMARA business meeting:

After the pledge and roll call, which revealed 16 members present, the secretary's and treasurer's reports were read and accepted.

For committee reports, Bill Miller, K1IBR, stated that aside from the fact that no further problems with the repeater had been brought to his attention there was no technical business to report on. Bill Field, WA1FYF, reported that with the various building improvement projects completed last year he believes that fuel oil consumption has been reduced.

Under old business, Pete, KA1WOJ, brought before the body three motions approved in 1993 that the members may want to continue in 1994. The motions were:

From July 1, 1993 - Motion to reduce the price of club building keys from \$2.00 to \$1.00 and those who have paid a \$2.00 charge be reimbursed if requested.

From July 1, 1993 - Motion to allow the use of the "00" repeater for next year's Fairhaven Road Race.

From August 5, 1993 - Motion to appropriate the expenditure of \$500 for the paint and related supplies, with the Painting Committee to pick the color and make all necessary arrangements to paint the club building.

A motion to revive the three motions for 1994, was seconded and approved.

There was discussion on various dues reduction proposals from 1993 to attract new members. It was agreed that these proposals would be renewed on an as-needed basis.

Under new business, Bill, WA1FYF, advised the members that a riding lawn mower was offered to the club for \$25. The mower is in need of carburetor work. After some discussion, a motion was passed to empower Rich Loiselle, KD1QQ, to use his best judgement to purchase the lawn mower if he feels it is economical to repair.

Bob Peckham, KA1YDG, reported that he had heard of legislation filed by U.S. Senator Metzenbaum that would severely restrict the use of scanners and two-way radios in vehicles, and that the senator made statements to the effect that ham radio operators were not needed and that emergency communications could be handled by cellular phone. Members should keep alert for future developments on this issue.



Bill, WA1FYF, stated that he is looking for an outdoor American flag for the club flagpole and he solicited the help of members in attempting to securing one without cost.

Pete, KA1WOJ, reported that the Zero Beat newsletter is looking for advertisers to offset some of the costs of the

newsletter and possibly reducing the subscription cost to members.

Pete also informed the members that he is looking to set-up a committee for HAMFEST'94 and start working on notifications to the various ham publications. Several members expressed interest and Pete volunteered to chair the committee.

Bob, KA1YDG, advised the members of correspondence received from the Council of Eastern Massachusetts Amateur Radio Clubs announcing a meeting on January 22.

After voting Jeffrey Peckham, N1LIF, and Sam Wagstaff, N1PGN, in as full members, the meeting was adjourned.

Next Meeting

The next SEMARA business meeting is February 3, 1994, 7:30 pm. The club meets Thursdays, with business meetings on the first Thursday of the month.

Time to Renew

Remember, it's time to renew your membership! Dues must be paid by the March meeting.

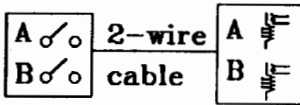
For many, it's also time to renew your subscription to the Zerobeat. The rates are \$6/yr for SEMARA members, and \$10/yr for non-members. The Zerobeat mailing labels now show the year and month of the last issue you will receive. It's a two-digit year, followed by a dash,

and a two-digit month. Check your label and see if you need to renew, and send your check in right away!

Circuit Design Contest

Last month we initiated a "circuit design contest", as suggested by Bill, K1IBR. His idea was

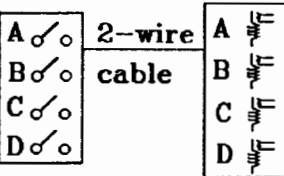
to have a contest to design a circuit that



would individually and remotely operate two (or more) relays using only a two wire cable between the two sites.

We figured that anything that could be controlled by a two wire cable, could be controlled via radio, given the right equipment, and so we thought it would be provoking and interesting to our readers.

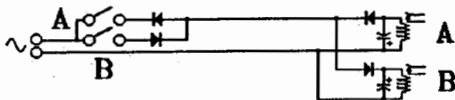
We even expanded the contest to include a four-relay, 2 wire version,



since we thought the two-relay version was just plain too easy.

The rules were simple: Design a circuit using a two wire cable to remotely and individually control the relays. 12 volt systems are preferred, but it was all up to the designer. Even the style of switches was left open.

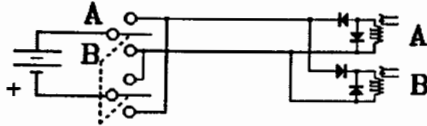
First, here's Bill's original two-relay design. It's simple, easy to understand,



and doesn't take a lot of parts. It consists of an AC power supply, a couple of switches, some diodes, and, of course, the relays. Each relay can be individually turned on or off by using the appropriate SPST switch.

Another entry, by an anonymous designer, uses the same idea, but a DC power

supply, and a DPDT-center-off switch. It



works with one flaw, it doesn't allow both relays to be active at the same time. A short chat with the originator revealed that a new design may be submitted in the future.

For the four relay version, Bill, K1IBR, submitted several versions, all ingenious. He shows how to remotely power the relays and control them at the same time. We'll show these and any other submissions in the next issue.

As an observation, all of the submissions show remotely powering the relay, which is not a requirement of the design. Remember, the rules say individually and remotely control the relays.

It's not too late to get your submission finished and sent in!

222 MHz Band Changes

The FCC has acted to expand privileges for Novice class licensees on the 222-MHz band. The changes, effective February 1, 1994, will allow Novice operation in the entire 222-225 MHz band; Novices currently have access to 222.10-223.91 MHz.

Expanding Novice privileges to include the entire 1.25 meter band makes sense since Novices already are permitted to use SSB and CW on portions of the HF bands, and there was no reason why they should not be permitted to utilize those same modes in the entirety of the 222-225 MHz band, where other licensees use those modes.

At the same time, the FCC denied a proposal to allow Novices to be licensees and control operators of repeaters on both the 222 and 1240 MHz bands.

Blind Hams

Pass this along to a friend with eye trouble. There is a company, C-TECH, which has available hardware, software, and information useful to blind hams. Call the number 800-228-7798.

There are also shareware programs for the computer. Contact Ray, WY2D, at 914-856-1733 for more information.

NH QSO Party

The 1994 New Hampshire QSO Party is being sponsored by NHARA on February 12 from 1900 to 0700 UTC, and February 13 from 1400 to 0200 UTC.

Exchange signal report and QTH, once per band per mode. All bands will be operated from 160 M to 1.2 G.

Fists C.W. Club

Started in 1987 by George Longden, G3ZQS, the FISTS club has a membership of over 1000. The group has an affection for Morse that fosters the urge to preserve it in the face of those who, not understanding the joy and satisfaction to be had from its use, seek to destroy it.

Membership requires no minimum speed, only a Love of Morse. For more info, write to FISTS CW Club, Nancy Kott, WZ8C, 5450 Diehl Road, Metamora, MI, 48455.

QRP Nets

Interested in QRP? Here are a couple of NorthWest QRP Club nets you can check into for more information:

0300 UTC, Monday 10.123 KHz
07:30 AM, Saturday 3.561 KHz

Packet Directory

| | | | |
|---------|-----------|---------|--------|
| 144.990 | N1KBT | 145.090 | KC1CE |
| 144.990 | NS1N | 145.090 | KD1NU |
| 145.010 | Fara Digi | 145.570 | WA1GAJ |
| 145.010 | N1CSI | 145.530 | KQ1K |
| 145.050 | WA1ZUF | 145.710 | KA1THM |
| 145.070 | WQ1O | 145.710 | KC1KM |
| 145.090 | AA1FS | 145.710 | N1LDY |
| 145.090 | K1UGM | 145.730 | KC1UA |

Message Handlers

The Virginia Beach Amateur Radio Club operated its annual Christmas Message Center from the Pembroke Mall, and originated over 1400 messages from mall customers and club members.

The center involved over 100 of the club's members. Traffic was sent both via voice and digital modes.

Calibrations

HF Shortwave radio broadcasts are a useful source of accurate time and frequency information, and are popular in calibrating radios and clocks. Signals from stations such as WWV in Colorado provide a frequency standard, as well as precise and accurate time signals.

WWV (and WWVH in Hawaii) is operated by the National Institute of Standards and Technology (NIST), and is on the air essentially 24 hours a day on several frequencies, 2.5, 5, 10, 15, and 20 MHz. Other countries, such as China, India, and Japan, use these same frequencies for basically the same purpose.



The stations get signals from a cesium beam frequency source, and the oscillators are kept within 1.00×10^{-12} of the frequency standard. The time is also kept within a few microseconds of the atomic time scale, UTC.

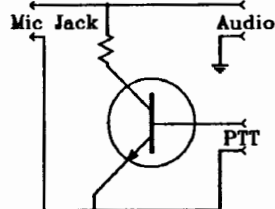
At the beginning of every second, a 5 millisecond burst of 1000 Hz (1200 Hz at WWVH) is transmitted, except for the 29th and 59th second. The first pulse of

every minute is extended to 800 milliseconds, and the first pulse of every hour is an 800 millisecond 1500 Hz burst. Each pulse is preceded by a 10 milliseconds of silence and is followed by 25 milliseconds of silence, even during voice announcements.

The "ticks" have priority at all time, making it relatively easy to design and build a "time-detection" circuit to put your clock in sync.

HTX-202 and Packet

Some TNCs have a problem keying the Realistic HTX-202 handheld radio, a radio which is popular for portable and mobile packet operations. The circuit shown here could be of help. It's composed of a 2.2K ohm resistor and an ordinary general purpose NPN transistor.



Sidney, Maine

The Bean School in Sidney, Maine has been selected to participate in the STS-60 Shuttle SAREX experiment. Scheduled to liftoff on January 27, STS-60 will have two U.S. astronauts with Amateur licenses. Phil, N1IFP, is the coordinator at Bean School.



The astronauts, Charles Bolen and Ronald Sega, passed their no-code technician tests at a W5YI-VEC session in Houston.

RF Tax

The New Jersey Department of Environmental Protection and Energy issued a proposal in December to register and

'94 SEMARA OFFICERS

| |
|--|
| President |
| Pete Carreiro, KA1WOJ, 993-6262 |
| Vice-President |
| Robert Peckham, KA1YDG, 995-9137 |
| Secretary |
| Karen Peckham, N1LIE, 995-9137 |
| Treasurer |
| Pat Carreiro, KA1YUH, 993-6262 |
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| Bill Field, WA1FYF |
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| Edward Blouin, KA1AW |
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| Bill Field, WA1FYF, Chairman |
| Technical Committee |
| William M. Miller, Jr., K1IBR, Chairman |
| Ways & Means Committee |
| Pat Carreiro, KA1YUH, Chairman |

assess fees for sources of radio frequency radiation. If adopted the rules would assess fees for RF sources ranging from communications, satellite earth stations, navigation, radar, and microwave heaters.

One observer noted "What New Jersey state regulators are proposing is nothing less than the state licensing of RF emitters for which federal licenses are already required. Put succinctly, they can't do that."

Repeater Directory

| | |
|-----------|------------------------|
| 145.150 - | WA1DGW, Fall River |
| 145.490 - | KA1WBF, Fairhaven |
| 146.700 - | WA1RBT, Cranston |
| 146.655 - | WA1GPO, Falmouth |
| 146.685 - | N1OEG, Plymouth |
| 147.000 + | W1AEC, South Dartmouth |
| 147.045 + | WA1AIC, Yarmouth |
| 147.135 + | ND1N, Taunton |
| 147.180 + | WB1FLD, Bridgewater |
| 147.315 + | N1BBT, Wareham |
| 442.200 + | NY1D, Fall River |
| 443.450 + | K1MYL, Westport |
| 443.600 + | NS1N, Norwell |
| 444.250 + | WA1GPO, Falmouth |
| 444.350 + | W1ACT, Fall River |
| 444.550 + | WA1ZUF, Bridgewater |
| 446.325 - | KA1CLX, Plymouth |
| 446.625 - | NC1K, Plymouth |
| 448.675 - | N1FPH, West Greenwich |

Know of any local repeater frequencies not listed here? Send them in to the editor!

CALENDAR

January

22: Computer Show, Warwick, RI

February

3: 7:30p, SEMARA Business Meeting

6: Computer Show, Swansea, MA

19: Ham Fest/Flea, Marlborough

20: Ham Fest, Mattapoisett

March

3: 7:30p, SEMARA Business Meeting

6: 10:30a, Ham Fest, Braintree, MA

12: Computer Show, Taunton, MA

20: Ham Fest, Mattapoisett

26: BBS Show, Fall River

April

7: 7:30p, SEMARA Business Meeting

17: MIT Flea Market

29,30: Dayton

May

1 Dayton

5: 7:30p, SEMARA Business Meeting

14: National Exam Day

15: MIT Flea Market

June

2: 7:30p, SEMARA Business Meeting

5: Flea, Newington, CT

19: MIT Flea Market

July

7: 7:30p, SEMARA Business Meeting

17: MIT Flea Market

August

4: 7:30p, SEMARA Business Meeting

21: MIT Flea Market

VE EXAMS

January

23: Shirley, MA Tom, 508-425-6672*

28: Holyoke, MA Jim, 413-245-3228

29: Slatersville, RI Bob, 401-333-2129

30: Shirley, MA Tom, 508-425-6672*

February

2: Acton, MA Dave, 508-263-3712*

2: Cambridge, MA Bob, 617-593-1955

5: Marshfield, MA Paul, 617-383-2637

5: Worcester, MA Bob, 508-831-5435

5: Bedford, MA Alan, 617-466-2698*

5: Middletown, RI Jack, 401-683-2250

6: Athol, MA John, 508-249-5905

6: Shirley, MA Tom, 508-425-6672*

9: Billerica, MA Bruce, 508-851-2886

10: Providence, RI Judy, 401-231-9156

12: Marlboro, MA Bob, 508-485-7006*

12: Brewster, MA Henry, 508-255-2818

12: Falmouth, MA Geoffrey, 508-548-0969

13: Gloucester, MA Rick, 508-283-2278

13: Shirley, MA Tom, 508-425-6672*

16: Cambridge, MA Nick, 617-253-3776

19: Melrose, MA Scott, 617-322-7654

20: Shirley, MA Tom, 508-425-6672*

25: Holyoke, MA Jim, 413-245-3228

26: Slatersville, RI Bob, 401-333-2129

27: Shirley, MA Tom, 508-425-6672*

March

2: Acton, MA Dave, 508-263-3712*

5: Marshfield, MA Jeff, 508-746-6184

6: Shirley, MA Tom, 508-425-6672*

6: Northampton, MA Jim, 413-245-3228

7: Cambridge, MA Bob, 617-593-1955

9: Billerica, MA Bruce, 508-851-2886



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| | |
|--------------------|------------------------|
| 10: Providence, RI | Judy, 401-231-9156 |
| 12: Marlboro, MA | Bob, 508-485-7006* |
| 12: Pittsfield, MA | Adrian, 413-458-8219 |
| 12: Falmouth, MA | Geoffrey, 508-548-0969 |
| 13: Gloucester, MA | Rick, 508-283-2278 |
| 13: Shirley, MA | Tom, 508-425-6672* |
| 19: Melrose, MA | Scott, 617-322-7654 |
| 20: Shirley, MA | Tom, 508-425-6672* |
| 23: Cambridge, MA | Nick, 617-253-3776 |
| 25: Holyoke, MA | Jim, 413-245-3228 |
| 27: Shirley, MA | Tom, 508-425-6672* |

*Some sessions require preregistration and do not allow walk-ins. Please check with the contact listed for each session to verify the exam date, time, and location.

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South Dartmouth, MA 02748



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