

# ZERO BEAT

6-84



HAMPDEN COUNTY RADIO ASSOCIATION, INC

SPRINGFIELD, MASS

JUNE 1984

ARRL AFFILIATED, 36th YEAR

**NEXT MEETING:**

FRIDAY, JUNE 1ST

FEEDING HILLS CONGREGATIONAL CHURCH,

OUR ANNUAL CLUB BANQUET!

FEEDING HILLS, MASS

ROAST BEEF DINNER WITH ALL THE TRIMMINGS! \$8.00 per person

6:30 pm hors d'oeuvres

7:00 pm dinner

DOOR PRIZES!

**"SALUTE TO ALL PAST/PRESENT QSL BUREAU SORTERS!!!"**

Effective July 1st, 1984, the Hampden County Radio Association will no longer sponsor the W1-QSL Bureau. This is your last chance to say "Thank You" to all the people who've made the bureau such a success!

Tickets are available from any club officer or call Steve Nelson, WALEYF at 596-8216. Only a limited number are available.

EDITORIAL

*It's been a good year for the Hampden County Radio Association, and I want to thank everyone who helped make it good. The do-ers remain a distinct minority, which I hope will change next season.*

*A new Board of Directors will be installed at the June banquet and we wish them well. Perhaps the policy of dropping activities not supported by the members will continue. Someone asked me why the banquet is not held up at the Westfield Y. The Judo club used to put it on for us. Well, the truth of the matter is that they can't make enough money off of us to be worthwhile doing all the work! Hams are Cheap, with a capital "C"! If we could guarantee a 100 people to feed, it'd be no sweat having the Westfield Y serve it up. But with a struggle to even get 50, the FH Church is really about the only place we can go. Would you prefer to go to a restaurant and buy your own dinner?*

*As you know, we are also disappointed by the ticket sales to the ARRL National Convention. The Board went to all the trouble to set up a nice trip, at a good price, and no hassles, and no one is supporting it. Why bother with that type of thing in the future if the membership isn't interested?*

*The club is made up of the members, and YOU COUNT!*

73, K1BE

%%%%%%%%%  
DUES ARE \$8.50 PER SEASON. (Sept-June) MAIL TO: Greg Stoddard, N1AEH,  
1500 Mapleton Ave, Suffield, CT 06078

JANUARY VHF SWEEPSTAKES RESULTS

Well, gang, we didn't take the Number One spot for the third year in a row, but we did take the #3 position! The HCRA was edged out by the South Jersey group and Warminster club by only 40,000 points. At least we all know that the HCRA can be on top again in 1985, if everyone pitches in!

RESULTS:

Third Place in the Medium Catagory

Score: 132,969 POINTS 31 ENTRIES

TOP CLUB SCORER: K1FO SINGLE OP

TOP N.E. Division: K1FO SINGLE OP

TOP MULTI-OP 3117D



Many thanks to everyone who helped in big and small ways. A complete report will be in the September issue of ZERO BEAT.

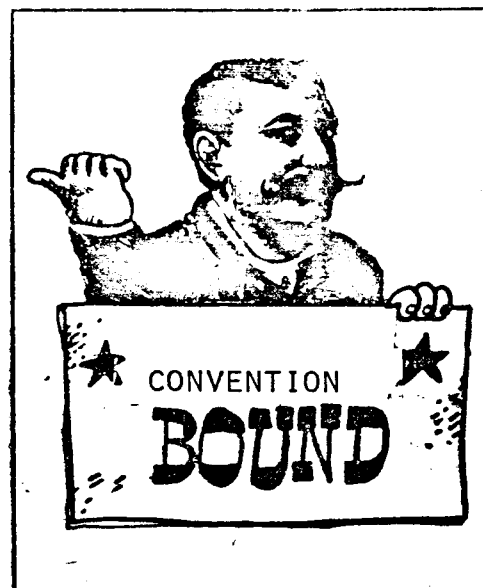
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NOVICE ROUNDUP RESULTS

Our very own K1KPH took the top honors in the Western-Mass Section with a bodacious score of 33,540 points! Bob was third in the New England division and almost took the first place. K1KVF was #2 in West Mass with a score of 12,992. Our congratulations, and we hope to see more club members participate in all the contests. Zero Beat will give you copies of the contest log sheets if you request them. Send an SASE or make a phona call to the editor at least three days before the club meetings and we'll bring them to the meeting for you.

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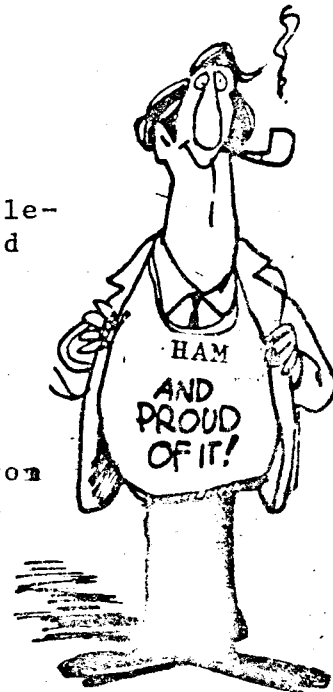
FOR SALE: WILSON SYSTEM ONE 5 element  
Tri-bander VG condition,  
Russ, K1GIP 467-3425



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KIBUB PROVIDES HAM RADIO COMMUNICATIONS  
TO THE OLYMPIC TORCH RUN!

Club officer Bob Gravel, K1BUB, is a member of the telephone company Pioneers. Bob was the ham who suggested a special event station at the winter Olympics many years ago and then went up there to operate it. Well, he's also going to take part in this year's Olympic Torch Run. Bob's going to be a ham-driver for the van which will be following the torch runner and using amateur radio to provide communications. His week is number 4, and the runner will be traveling from Indiana to Mississippi. Bob has to take his vacation in order to do this, but we are all proud of him! We don't know if you can work him and get a special QSL card, but Bob's promised to take a lot of slides and share them with us on his return. With all the slides from the winter Olympics, and these running ones, we'll just have to get him to do a club meeting in the Fall. Good idea!



\*\*\*\*\*

TIDBITS

N1CQT has had a mild heart attack and has been in the hospital. Hope you're feeling better, Al... Many thanks to the club members who brought items to sell at the Flea Market. Without the advance publicity we need, we attracted few dealers and you saved the day. Hopefully, we'll be back to a weekender next year... K1KRRJ passed advanced, K1KPH and K1KBN passed general!!! FB, and we hope you'll be up at Field Day to operate with your new privileges...

DEDICATION

The following letter was sent into QST by a board member. While it was not selected for publication, we felt that it was worthwhile to re-print here in ZERO BEAT, just to let people know how seriously the sorters take their responsibilities. The letter is about Bob Sullivan.

Dear sir,

This is for possible publication in QST.

Realizing that to most hams the incoming QSL bureau is invisible and taken for granted, I'd like to share something that happened recently. Some of the sorters take on that task because they can not leave their homes. It is an interesting, useful and challenging way to spend their time. One of the sorters last month gave away all of his ham related items, and made special arrangements to have the QSL cards he sorts picked up immediately. He then went into the hospital and died suddenly. We all think he must have known the end was near. What struck me is he was so dedicated to getting those cards to so many faceless hams that he insisted they be picked up. His dedication was so strong that perhaps even the short delay caused by his death was unacceptable.

W1 QSL Bureau

## ANTENNA CIRCULARITY-PART III

By  
Art Zavarella, W1KK

Since writing Part II that appeared in the March '84 Zero Beat, we have been continuing our search for some positive way of differentiating between RHC (Right-Hand Circular) and LHC (Left-Hand Circular). This is for connecting crossed Yagis, primarily for satellite use with Oscar 10, Mode B. KLM in California and Cushcraft in N.H., the two most popular commercial producers appear to be vice-versa. The comparison between their two systems of crossed Yagis is further complicated in that KLM uses folded dipole/balun driven elements with vertical elements one quarter wave forward of the horizontal elements, whereas Cushcraft uses Reddi ( $\gamma$ ) Match D.E.'s, with no displacement along the boom between corresponding H and V elements.

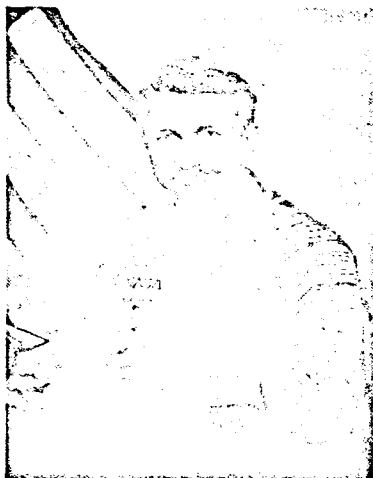
We turned to the helix as a possible "yardstick" of circularity: a 2-meter helix RHC and definitely so, because we wound it that way, right hand screw from the 4x4 foot reflector we had used on the earlier turnstile. The general information on the helix came from "VHF Antenna Handbook", edited by WB4RVH, pg 59, Green Publishing, inc. I used a junk box piece of RG-11 coax 32 feet long shorted at each end as the "fat" conductor. Four thin strips of recycled redwood 8 feet long were attached to and extended outward from and perpendicular to the screen reflector. At a spacing of 18 inches between turns, and each turn some 96 inches long, the redwood runners should be approximately 28 inches across at the diameter of the helix. The helix of 4 plus turns worked quite well considering the rough structure, and did have the expected broad-band feature. What was unexpected, however, was that unlike the Yagis, the giant corkscrew was RHC whether you looked at it from the front or from the back!

Some tests of a preliminary nature were made but were not considered too meaningful. Now that the weather is becoming more cooperative, the tests will be refined and repeated. It is hoped to include the "Quadraquad" in these tests. This latest OSCAR 10 version of the familiar Quad was described in the April 1984 QST by VK5RN, and further simplified by him in Technical Correspondence in the May issue. In the Quadraquad, VK5RN very cleverly makes use of the fact that a quad element which is a full wave has two dipoles built-in, roughly at right angles to each other. So all he had to do was feed one of the dipoles of the driven element with a 90 degree delay line, relative to the other half of the element. A neat way of making one driven element do roughly double duty in circles, with the one-two punch! The author reports a 10 db gain with only four elements spaced 16 inches apart. In the next article we hope to have some indication of how this Quadraquad, the helix, KLM, and Cushcraft antennas compare.

Editor's note: Look for part IV of this series some time in the fall issues of ZERO BEAT.

**OWEN GARRIOTT, W5LFL, WILL BE AT THE 1984 ARRL NATIONAL CONVENTION.  
WILL YOU?**

Yes! You too can meet and talk with Dr. Owen Garrriott, the first Ham to operate from space, if you attend the 1984 ARRL National Convention. And that's not all. This promises to be the biggest, most exciting convention ever, with activities covering every facet of Ham Radio from CW to contests to traffic to DX to OSCAR to repeaters to RTTY to packet to AMTOR and more, more, more! Just look at the lineup:



**Friday, July 20th -**

Morning & Afternoon - exhibits, programs and seminars.  
Night - celebrate both the 15th anniversary of man's first moon landing and the first amateur operation from space, at a gala party featuring a NASA program presented by W5LFL. You'll also have a chance to meet and speak with him, talk over your QSO with him during STS-9, ask him about the space program and any future amateur operations from space ... it's the opportunity of a lifetime!

**Saturday, July 21st -**

Morning & Afternoon - exhibits, programs and seminars, including ARRL and FCC Forums. Meet League and FCC officials, discuss amateur affairs, learn what's what from the source.

Night - The Main Banquet, including dinner and festivities at which W5LFL will be the featured speaker.

**Sunday, July 22nd -**

Morning & Afternoon - exhibits and more programs, until late afternoon closing.

And for the non-ham members of your family... there's New York City, cultural capital of the world! The site of this great convention will be the Hotel Penta, situated in the heart of Manhattan, near everything there is to see and do in NYC. You and your family will be within easy walking distance (in many cases just a few steps) from Macy's, Penn Station, the Empire State Building, NY's famous Garment District and Fur District, Radio City, Broadway's renowned theaters and famous Fifth Avenue shops such as Gucci, Tiffany and Cartier plus restaurants, restaurants, restaurants, from world-famous gourmet havens to your favorite fast food chain. All other NY attractions such as Greenwich Village, Wall Street, the World Trade Center plus the city's incomparable museums, nightclubs and discos are easily accessible via mass transit. In fact, there's so much convenient mass transit available in Manhattan that there's no need to bring your car!

**SPECIAL HOTEL RATE FOR  
CONVENTION ATTENDEES MEANS BIG SAVINGS!**

Use the special Penta reservation form provided and get your room at the incredible price of \$56.00 per couple, per night. If you've ever been to New York before, you'll appreciate what a fantastic bargain this is!

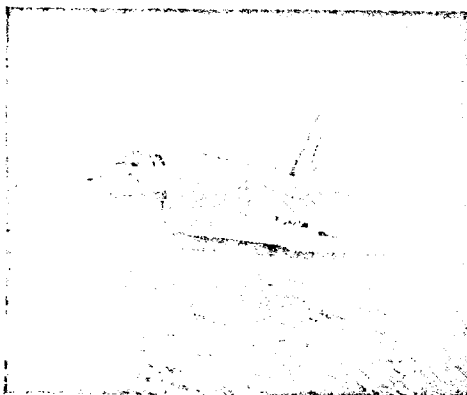
**BANQUET RESERVATIONS:**

**OPEN SEATING FOR COUPLES OR SINGLES, OR YOU CAN GET YOUR CLUB OR GROUP TOGETHER AT A RESERVED TABLE**

Banquet tickets are only \$26.00 per person, and must be ordered in-advance. Tables seat 10, and you may reserve an entire table with a minimum group order of eight or more.

**IMAGINE, THE MOST IMPORTANT ARRL NATIONAL EVER HELD...  
AND YOU CAN BE THERE. ACT NOW!**

Fill in the coupon below and enclose with an SASE and your check or money order, (no cash), made out to the Hudson Amateur Radio Council, and mail to: Mike Troy, AJ1J, R.R. 4 - Box 19C, Pound Ridge, NY 10576



Dear Mike:

Enclosed is check or m.o. in the amount of \$ \_\_\_\_\_.

Please send \_\_\_\_\_ advance registrations at \$4.00 each (\$5.00 after July 1), and \_\_\_\_\_ banquet seats at \$26.00 each.

Name \_\_\_\_\_ Call \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_



please send hotel reservation form

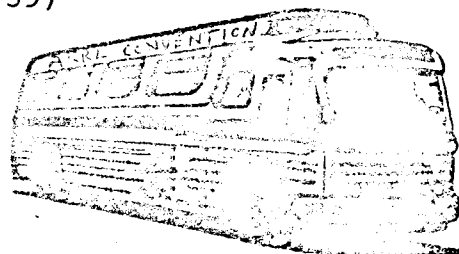
CHARTER BUS TRIP TO THE ARRL NATIONAL CONVENTION

Meet at the Agawam High School, which is on route 57, just as the road becomes a single lane again. The bus will leave at 7am, so plan on arriving before that time. You'll need your bus ticket in order to board. Toilet facilities are on the bus, and the ride to New York City will take about 3 hours. Once we're at the convention, you're free to do whatever you like, and the bus will leave NYC at 10pm.

You can purchase your admission tickets to the convention at the door for \$5.00, or via mail for \$4.00 by writing to: Mike Troy, AJ1J, R.R. 4- Box 19C, Pound Ridge, NY 10576 . Banquet tickets are \$26.00 each, and should be ordered beforehand from Mike.

If there are any bus tickets left, you can purchase them from Jeffrey J. Duquette, K1BE, PO Box 346, Southwick, Mass 01077 for \$14.00 each. First come-first served! Make your check payable to the HCRA. (phone in the evenings-569-6739)

This is going to be great fun and something to talk about for years! Imagine getting to meet W5LFL and listen to him talk about what it was like to be the first ham in space! Don't miss out on this trip of a lifetime.



\*\*\*\*\*IMPORTANT NOTICE\*\*\*\*\*  
\*\*\*\*\* IF WE HAVE NOT SOLD \*\*\*\*\*  
\*\*\*\*\* AT LEAST 40 SEATS BY \*\*\*\*\*  
\*\*\*\*\* SATURDAY, JUNE 2nd, \*\*\*\*\*  
\*\*\*\*\* WE'LL REFUND YOUR MONEY!\*\*\*\*\*

\*\*\*\*\*IF YOU'RE THINKING OF GOING, LET US KNOW SO THAT WE DON'T CANCEL THE BUS!\*\*\*\*\*

**GE PROGLINES FOR SALE**

The club is selling GE Proglines for only \$15.00 each. These can be converted over to 6 meter operation and we have hams ready to assist you. These are complete units, and anyone can buy one or ten! Pat, N1AJZ, has graciously consented to handle this for the club. His address:

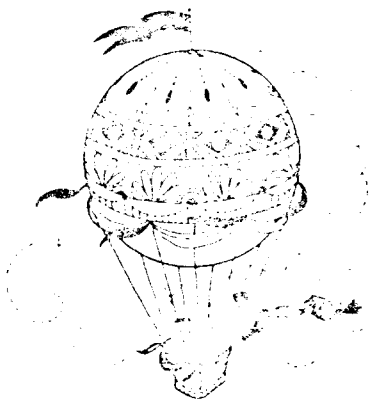
Pat Foley, N1AJZ  
142 Shawmut Street  
Springfield, MA 01108

Contact Pat for all information and you can pay him for the radio.

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FOR SALE: Ameritron AL-80, Compact Kilowatt Amp, 160 thru 10 meters, Full QSK, \$450.00 W1KK 786-9115

FOR SALE: Hallicrafter's HT-37 Xmtr, Gd Cx, \$100.00, Kenwood TS-830S Mint, \$695.00, Kenwood TR-2400, GD CX, \$200.00, with hand strap, ear plug, and 110v Charger Call Mike WB1AIK 583 8930



COME ONE, COME ALL!!

We need everyone at Field Day, 1984. Once again it's at the Middlefield Fairgrounds, high on a mountaintop in the Berkshires. If you've never been, you're missing out on some great radio fun! Band captains are needed for the following bands and if you sign up you take the responsibility of setting up a complete station, including emergency power. Call Jeff, K1BE, at 569-6739 to sign up. What's available:

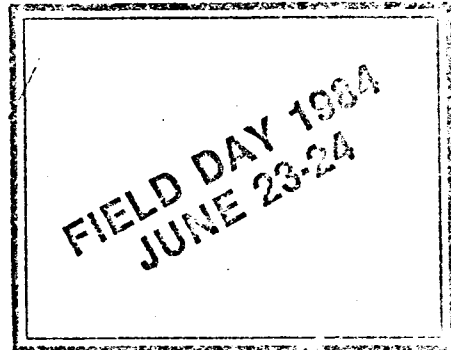
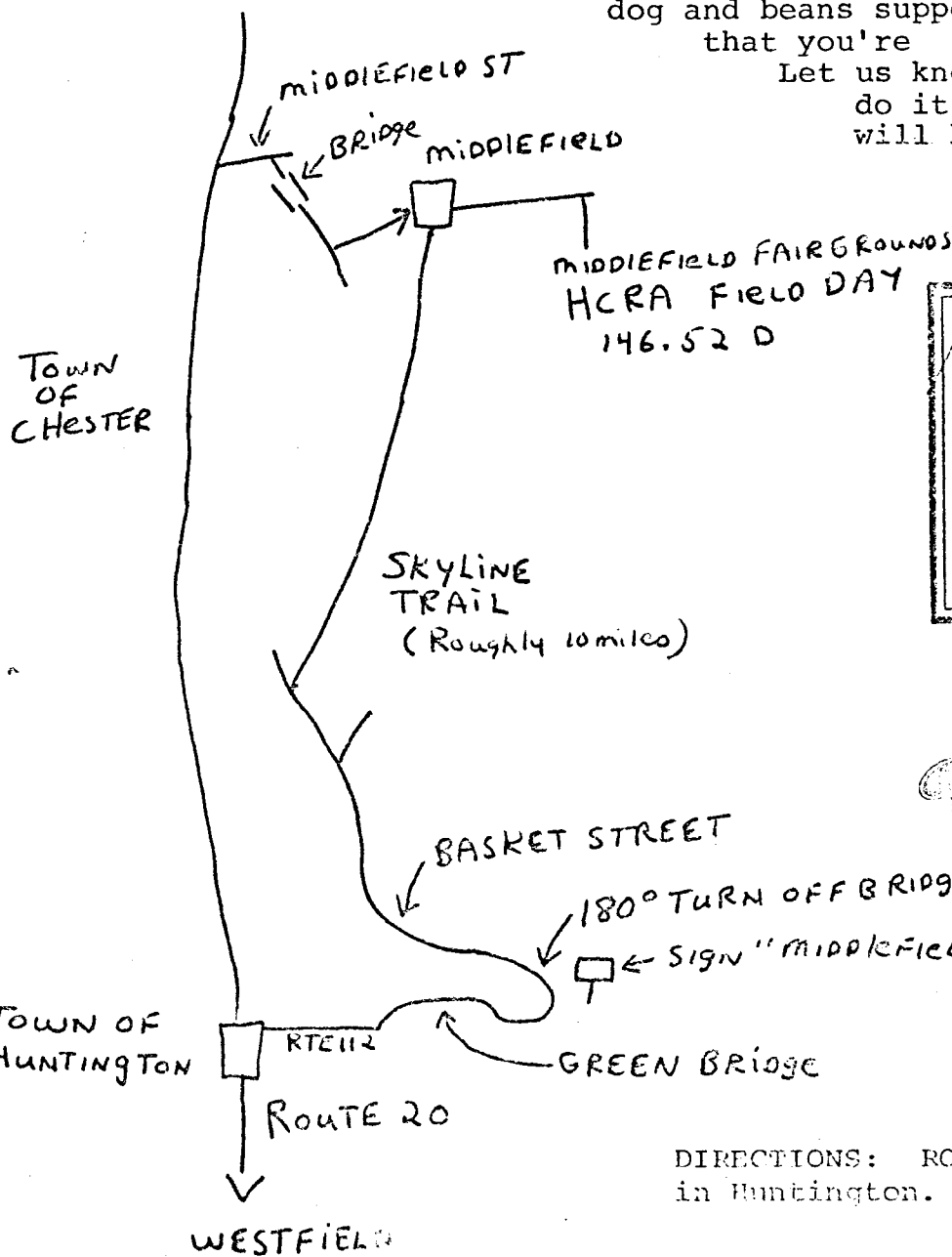
WHERE'S FIELD DAY????

Novice Station

OTHER \_\_\_\_\_

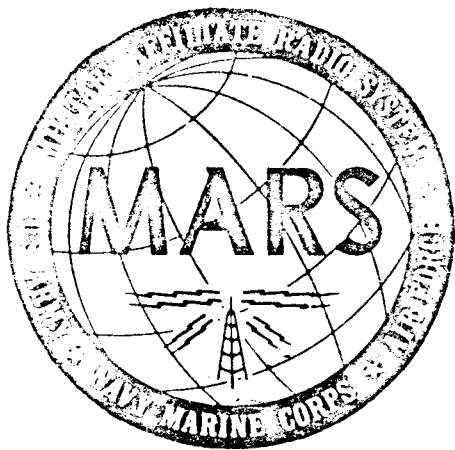
- |            |           |         |            |
|------------|-----------|---------|------------|
| 80 meters  | phone     | WAI PGT | CW         |
| 40 meters  | phone     |         | CW WAI CQF |
| 20 meters  | phone     |         | CW         |
| 15 meters  | phone /cw |         |            |
| 10 meters  | phone/cw  | WAI ZKT |            |
| 2/6 meters | phone/cw  |         |            |

We'd like to have our traditional hot dog and beans supper but are hesitant that you're really interested. Let us know early on and we'll do it. Coffee and drinks will be provided by the club.



We Need  
Volunteers

DIRECTIONS: ROUTE 20 to Skyline Drive in Huntington. Use 146.52D



Chuck Clark, K4ZN

## MARS

Before World War I, the military tended to think of amateurs as nuisances. At one time, the Navy even tried to get us legislated off the air because we interfered with their communications. Fortunately, the Marconi company pointed out that it was not our fault, but rather the obsolete equipment the Navy was using — the receivers that lacked the selectivity provided by Marconi gear — that was responsible for the interference, and was able to defeat the bill in Congress and save the day for Amateur Radio.

But with the entry of the United States into the war, suddenly the military needed all the operators it could get, and thousands of amateurs saw service. After the war, the military did not forget, and since the 1920's, the military and Amateur Radio have worked together.

At present, there is the Military Affiliate Radio System (MARS), which is actually three systems, run respectively by the Army, the Navy/Marine Corps and the Air Force. It is not an Amateur Radio service, although all civilians who participate in it must be licensed amateurs, and their membership is automatically terminated if they fail to renew their amateur licenses or to renew their membership in MARS when they renew their amateur licenses.

MARS nets operate outside the amateur bands, on U.S. government frequencies, and MARS stations are government stations. As such, they are not subject to the FCC, but rather, to the branch of the military that they support.

Incidentally, it would be interesting if someone would bring this fact up in a court case involving zoning restrictions, antenna limitations and radio-frequency interference, perhaps making a motion for dismissal of the case because a MARS station is a U.S. government station and so not subject to such ordinances.

MARS has several purposes. Primarily, it serves as the backup system of communication to be used if regular communication channels are inoperative

or overloaded. In addition, it serves as a means of training operators and electronics technicians, increasing the number of such people who would be vitally needed in an emergency. And it serves as a traffic net much like the National Traffic System (which is, in fact, modeled fairly closely on the MARS pattern), providing military personnel and others — particularly those serving overseas — with a free message and phone patch service.

MARS operation is somewhat different from amateur operation, even amateur traffic net operation. Procedures are generally more carefully observed and are slightly different from those of amateurs.

On CW and RATT mets, the Z signals are used in addition to the Q signals: ZGN, station not heard; ZKA, this station is net control; ZKE, checking into net; ZKJ, closing station; ZUJ, please stand by.

On voice, precisely defined phrases are used. Thus, you don't say, "Back to you." You say, "Over." And you must always say, "Over" or "Out" at the end of each transmission, depending on whether or not you expect a reply.

If you want to hear examples of snappy operating, listen to the MARS nets that operate just outside our 40- and 80-meter bands (and sometimes near the 20-meter band also). Oh yes, MARS does have a few examples of poor operating too, and you may hear them, but in general, the quality is up with the best of the amateur nets.

As noted, there are MARS frequencies just outside our amateur bands. But MARS also uses frequencies far removed from our bands, 500 kHz or more away, so that most amateur band-only transceivers cannot reach them without modification. This is true of all the services, but particularly true of Air Force MARS. Fortunately, amateur ingenuity is as active in MARS as it is elsewhere, and no matter what kind of rig you are using, you will find somebody in the system who can tell you how to modify it to operate on any MARS frequency within reason.

Unlike amateur operation, MARS operation takes place on exactly specified frequencies. The various national and international frequency managers assign channels to fixed stations, with a center frequency and an allowable bandwidth. Further specifications, such as mode, carrier frequency and the like are up to the user.

TNX- "WORLD RADIO"

In the case of MARS stations, the user is the military service, and it specifies the carrier frequency for SSB (usually 1.5 kHz below the assigned center frequency), the frequency shift and speed for RATT — the type of emission for VHF. And the frequency has to be maintained closely, because some of the stations (and in many cases, the most important ones) on the net are operated by military personnel, many of whom are not qualified to tune their transmitters.

MARS members assume no obligations by joining, and are free to resign at any time. The only restriction you assume is that by joining one service's branch you are forbidden to join another, as you may belong to only one of the three organizations at any one time. You are expected to operate at least 12 hours in each quarter (comes out to about one hour per week) to maintain your status as an active member.

Any amateurs who wish to render this public service, or who merely want to find out more about it, may write to any or all the MARS headquarters:

Chief, Army MARS, U.S. Army Communications Command; ATTN: CP-OPS-OM; Fort Huachuca, AZ 85613.

Chief, Air Force MARS; HQ AFCC/TPMOG; Scott AFB, IL 62225.

Chief, Navy-Marine Corps MARS; Building 13; U.S. Naval Communications Unit; Washington, D.C. 20390.

## Move it, move it

This month's column will close with some words from Dan Ostroy, K2UL, that appeared in the January-February 1984 *New Jersey Traffic Bulletin*:

A point that should be drummed into the head of every net control station who dares to call up a traffic net: You are there to move the traffic, not to endlessly take check-ins! Too many times I have seen net sessions go to quarter past the hour and still no stations have been paired up and sent off frequency to pass traffic. How frustrating it is to check into a net with traffic that could be handled immediately and yet have to sit idly by while NCS listens to stations checking in QRU for the next 10 or 15 minutes . . . .

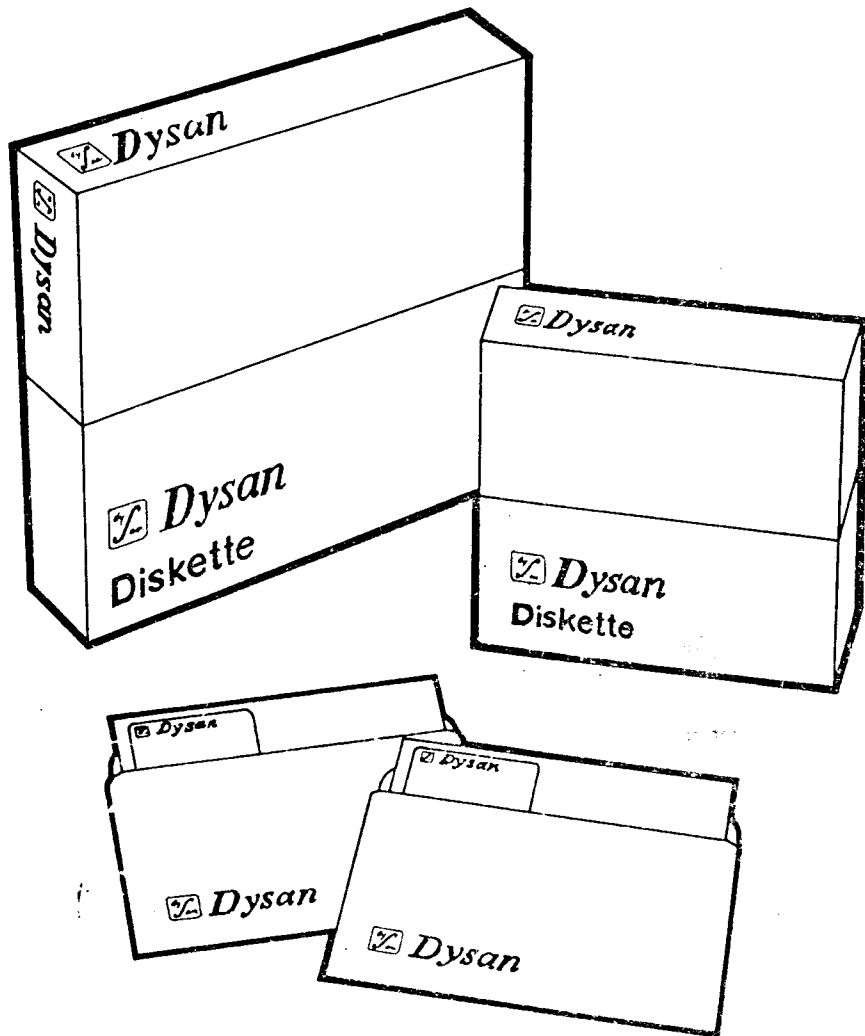
Here's a hint: when the first one or two check-ins have a large amount of traffic to list, halt the check-in process and ask for takers for the listed traffic before continuing to check in further stations.

My point is simply this: net time should be used efficiently. Every minute that goes by without traffic being passed is wasted. Some of us (especially those with 4-month-old babies crawling around the shack) have a difficult enough time finding a few minutes for net participation.

There is more to being a net control than taking check-ins. You are expected to control the net, and that means get the traffic passed and the stations cleared in as short a time as possible." □



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CORPORATION

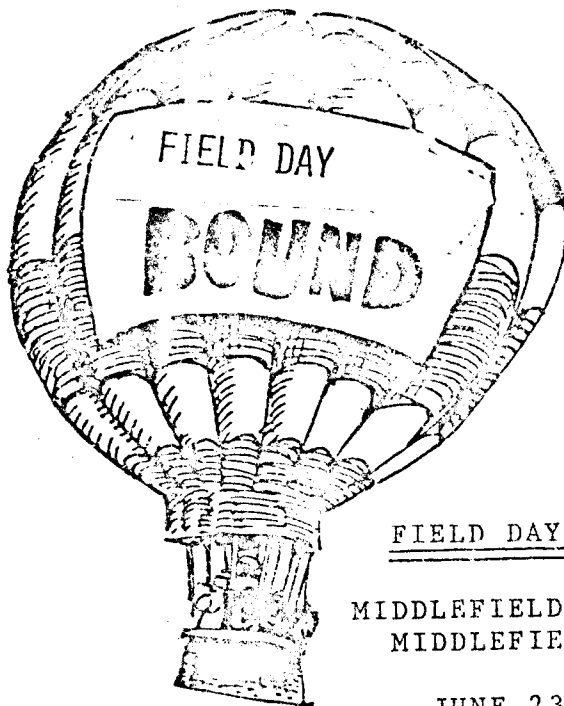
FIRST CLASS

JUNE 1984 ISSUE



TO:

ZERO BEAT  
c/o JEFF DUQUETTE  
P.O. BOX 346  
SOUTHWICK, MASS 01077



FIELD DAY 1984!!

MIDDLEFIELD FAIRGROUNDS,  
MIDDLEFIELD, MASS

JUNE 23rd, 24th

ALL ARE WELCOME!!!!!!!!!!!!!!

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- Friday, June 1st ANNUAL CLUB BANQUET
- June 9th-11th JUNE VHF QSO PARTY
- June 23rd-24th ARRL FIELD DAY
- July 14th-15th IARU RADIOSPORT CHAMPIONSHIP
- July 21st HCRA BUS TRIP TO THE ARRL NATIONAL CONVENTION.
- September 7th First HCRA meeting of the new season!

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