

# The *KEY*

The Newsletter of the Contoocook Valley Radio Club

<http://www.qsl.net/k1bke>

Volume 16, Number 2

May, 2004

## ***Farewell To a Friend***

It is with deep regret we must say good-bye to a friend, colleague, and founding CVRC Member Wilfred (Frenchy) French, K1DFQ. I didn't know Frenchy as well as most of you but I do remember him as a friend to all. He was always at the Field Day site to lend a hand and was happy to do so.

We dedicate this issue to you and say 73's Frenchy

## ***Frenchy***

### ***Michele Bergh, W1MKY***

For over 40 years, Wilfred French was a good friend and neighbor to my family. We spun our cars on frozen ponds in 1965. We camped out at Nash Bog Pond in 1966 - Louise brought her delicious beans and homemade bread. In the middle of the night, their hound that was tied to the center post of their tent, decided to go after some raccoons that were getting into the food. The hound lunged, the tent fell, and Frenchy, Louise,

Vernon, and Venita all started to yell at once. We woke up to bedlam and great hilarity.

For years, Frenchy came up to get crockery jugs full of what he called the best hard cider he ever had.- He got it out of the vinegar barrel and drank it down like water.

He came up and set traps for Fisher Cats that would come each night and haul away one of my White Leghorn hens from out of the apple trees. We caught 37 skunks.

He carried a book about the uses of wild plants. He taught me about the ones that got rid of warts and the itch of poison ivy.

40 years ago I wanted to join Ham Radio. Frenchy and Louise were having such a good time at it.. They were helping newcomers to pass their tests and to learn Morse Code. I wanted to be a part of their Radio Club. I found all of the people in it were friendly and interesting. Now, I have,- four decades later. A lot of the credit goes to the Frenches. They have always been a good example.

I bid a fond farewell to you, Frenchy, and hope you are having a great time in Heaven!

Mickie



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## ***Frenchy, K1DFQ***

### ***by Dale Clement, AF1T***

Wilfred French was an unforgettable character- someone who lived life on his own terms, and possessed a practical knowledge of just about everything. I must have first met him in 1963, while in high school and studying for my Novice license through a CVRC Class. Louise, K1LAS, taught Morse Code in a little wood-heated Club House.

Field Day on Craney Hill really turned me on to Ham Radio, and Frenchy's enthusiasm in putting it all together was contagious. He made me want to be a Ham, in a way that was more fun than school work could ever be. My image of Field Day will always include Frenchy in his jeep, or firing off his loud cannon!

Over the years, I realized that Frenchy knew and shared in lots of areas besides radio-he was into music, ice fishing, trapping, trail riding, and who-knows what else. He came over to help me cut tree limbs, trap a woodchuck, and catch a red squirrel that raided my house. I last visited Frenchy this Spring when he was painting his house. He seemed to feel good.

K1DFQ and K1LAS, many thanks.

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## ***Wilfred French***

### ***Sid Blanchard, K1CKL***

Frenchy, K1DFQ will be missed by many people. Frenchy had many friends, on and off the air.

The first time I saw Frenchy was in about 1948. My father worked in a saw mill for Stanley. It was common practice for the help to stop at Stanley's house in Hillsborough for a quick toddy and to pick up their pay checks late Friday afternoon.

I was in my fathers car in Stanley's driveway waiting for my father. There was an open Model T Ford pickup 2 cars in front of my father's. The cars in front of and behind the pickup had pulled very close to it's bumpers, so it appeared to be penned in. A young man wearing a tuxedo and stovepipe hat and a young lady in an evening

gown came out of Stanley's and got into the Model T. I learned latter that the young man was Wilfred French.

There probably aren't many of us left that have driven a Model T. The front wheels on the Model T turned almost 90 degrees. Frenchy managed to manipulate the pickup out from between the other two cars and right straight through the middle of Stanley's large potato patch to the highway. It was quite a sight to see Frenchy and Marlene going down the road in the open Model T wearing the stovepipe hat and evening gown.

Frenchy and I both became hams in the mid 50's and became acquainted. Starting in the late 50's and for about 30 years thereafter we worked together at Sylvania. I soon learned that what I had considered an unusual event at first seeing Frenchy was a common event for Frenchy. One time Frenchy, Louise and their children and my wife and I with our children camped out by the base of the State Police tower on top of Mount Kearsarge. I haven't been there for years, but at that time it was a steep path from the parking lot to the tower. Frenchy had a waiver at work restricting him from having to lift more than 40 lbs because of back trouble. I think he carried every thing they owned except the kitchen sink on his back in one load up to our camp site.

I could write a large book about such occurrences regarding Frenchy. There probably aren't many people that knew him that couldn't.

We sure will miss him!

Sid, K1CKL

## ***Remembering Frenchy***

### ***Steve Jones, N1JHJ***

Several years ago at a Field Day, Frenchy set up a telescope he had built and set it up to look at either the moon or something else. Ryan, my son, was with me that night and he'll always remember how Frenchy patiently described what Ryan was seeing as he gazed through the scope. Ryan really enjoyed that night and we'll both cherish the memory of Frenchy, his skills, his patience and his sense of humor.

Sincerely, Steve, N1JHJ

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# Frenchy

## Jerry Blanchard, K1BBQ

Frenchy was one of my best friends. I first met him through my brother, Sid/K1CKL, in the mid fifties. Several of us got our ham licenses around that time. Frenchy was one of the original members of CVRC. I recall the first field day on Craney hill when K1BKE was still alive. At that time we didn't have 2 meter repeaters, we used 6 meter AM as the local rag chew frequency.

Over the years since we have enjoyed Frenchy and Louise friendship. In addition to all of the ham radio activities, we also were involved in ice fishing, fishing, hunting, wild mushroom picking, gardening and just family activities.

During the years that I knew Frenchy there was never a dull moment, he always had something new going. He approached life with his Yankee can do enthusiasm that always inspired me.

In recent years we went back to 6 meters as our rag chew frequency. We would meet at least once a week in the evening and discuss our daily activities.

I still listen for Frenchy on 50.2 in the evenings.

Jerry, K1BBQ

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CVRC meetings are held on the second Tuesday of the month at the Hopkinton Town Library in Contoocook, NH. Members and nonmembers alike are welcomed. Talk-in is on the K1BKE 146.895 600 kHz (100 Hz PL) repeater.

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*The KEY* is published quarterly. The deadline for articles and submissions is the fourth Tuesday (coinciding with the usual business meeting schedule) of the preceding month.

## A Message from your Editor

### Lee Scott, AA1YN

I would like to thank those who submitted articles to help make this publication possible. I will be taking your articles either written by hand or preferably emailed to me - aa1yn@aa1yn.com then editing them into the newsletter. I will then email it to Don Curtis N1ZIH for printing and mailing.

Now, here's the PLEA - if you can receive notification of publication via email and then download the newsletter, let us know. This saves the club the expense of printing the newsletter and the mailing.

We desperately need articles to fill up the publication. If for some reason I get more articles than I need, I'll publish them in the next Key. Submission deadline is by the business meeting prior to publishing.

Missed the meeting? Want to know what was discussed in your absence? The club is trying to maintain a good collection of the meeting minutes online. Goto [www.qsl.net/k1bke/minutes.html](http://www.qsl.net/k1bke/minutes.html) and see what you missed. We try to get the minutes online within two weeks of the last meeting.

## Programs

By Dale Clement, AF1T

We all learned a lot about Soldering Techniques from Russell Richards, KB1JEX, at the May 11 meeting. This was one of those programs not to be missed. Guess I'll have to stop using my Weller soldering gun on those field-effect transistors.....

June 8 ( 7:30 P M. at the Hopkinton Library). "Field Day Extravaganza," with Mark Pride, K1RX. Learn how the National Champions at Port City ARC do Field Day!

July 10 ( Sat. afternoon). Tentative Annual Club Picnic. - Fun for the family. KB1JCX will demonstrate Radio Controlled Airplanes.

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## ***A Word from the President***

***John Moore - N1FOJ***

### ***The Two "F's"***

Greetings to All ! "F" number 1 . It looks like the CVRC Hamfest has Broken New Ground and been our Best Ever! The Club added approximately \$ 950.00 to the Treasury from this event. I would like to take this opportunity to personally Thank Everyone involved in this RipRoaring Success Story! NS1E - Jim McElroy for chairing the Flea Market Committee ; to NS1O - Al Bardwell for chairing the VE Session; to N1ZIH - Don and NH CAARES for Talk-In and Communications ; to K1LAS - Louise and W1MKY - Micky for the Food Service ; to N1ZGO - Scott for the Financial Wizardry ; to N1JI - Jock Irvine for his help in obtaining the Site and Setting Up ; The Henniker Community School for their Generous Donation of the use of the School Cafeteria ; to Jeff - KC1NCR for the use of his P.A System ; to the participating VE's ; to all the other Club Members who donated Their Time and Effort ( You know who you are ! ) ; To all the Sellers who took the time to come , even though there were other Hamfests going on during that weekend ; To all the Buyers who took the time to come also ( I do hope you found what you were looking for ! ) . A Very Special Thanks to our Speakers , N1JEZ - Mike Seguin - on Satellite Communications , K1WHS - Dave Olean - on Six Meters , and to N1FIK - Al for bringing the NH-ARES Emergency Communications Van up ! I could go on and on , But I think you can get the gist of what I am trying to say ; To All involved "Thank You and Well Done!" . I Look forward to seeing you at our Next One !

Now , On to the Next "F" . Field Day is Rapidly Approaching and we need to get busy preparing for it . This once a year Emergency Communications event at the end of June , sponsored by the ARRL , has over the years become a great time , for All Club Members and Others interested in our Hobby, to get together over by Long Pond in Henniker for a weekend of Communications , Great Food and Camaraderie. We need Your Help to make this Happen ! Jerry - K1BBQ has Graciously consented to be Field Day Chairman for

another year and would like to hear from you regarding any help you can give him . I Urge you to Call Him and Come Out and Lend a Hand !

73 , John - N1FOJ

## ***VE Session Report***

### ***Al Bardwell, NS1O***

#### **VE's present:**

- |    |                 |       |
|----|-----------------|-------|
| 1) | Allen Bardwell  | NS1O  |
| 2) | Kristy Upton    | AB1CG |
| 3) | George Moranian | N1NAZ |
| 4) | Paul Marsh      | K10CU |
| 5) | Jack Weber      | N1JLW |

#### **New Hams:**

Roland Garbe  
94 Beals Road  
Bedford, NH 03110

Stephen Piroso  
7 Heather Lane  
Bow, NH 03304

Joseph Areyzaga  
126 Edmond Street  
Manchester, NH 03102

Raymond Capes  
P.O. Box 156  
24 Champagne Road  
Francestown, NH 03043

Scott Finberg  
186 Aillsbury Road  
Londonderry, NH 03053

Kenneth Little  
7 Jay Drive  
Rindge, NH 03461

#### **Upgrades:**

Jeffery Venner KB1KOV  
549 Raymond Road  
Chester, NH 03036

Chris Merchant KA1LMR  
P.O. Box 1125  
Concord, NH 03302

Michael Noyes KB1KQV  
491 Raymond Road  
Chester, NH 03036

# Field Day 2004

## June 26 & 27

by K1BBQ

We have a FD 2004 committee in place planning this years activities.

John/N1FOJ (Band captain manager) and Jim/NS1E (Operations manager) are helping me organize field day this year. Other members on the committee are:

Band Captains

80 – Lee/AA1YN

40 – Art/K1BX

20 – Al/NS1O

15 – Dale/AF1T

10 – Micki/W1MKY

VHF – Steve/N1JHJ

GOTA – Lee/AA1YN

Other FD Functions:

Rob/K1CFI, Louise/K1LAS, Sonia/K1BBQ xyl, Jim/KB1EJY, Glen/N1GAQ, Scott/N1GOZ, Don/N1ZIH, Ken/K1MID, Rob/N1FSK

Field day is the yearly CVRC activity where members can spend a weekend together having fun camping out and demonstrating their emergency communications skills.

In addition to the band captain's stations we will have a GOTA station for all to operate, APRS/ Packet, Laser, SSTV and an antenna suspended by a balloon. The Boy Scouts will participate in a merit badge program. Their will also be a hidden transmitter hunt.

All CVRC members please come by and say hello to fellow members. If you can stay we need members to assist in set up/tear down, operating stations with the band captains, food, etc.

## K1BKE Field Day

by Dale Clement, AF1T

Now's the time to be thinking about Field day. It's the weekend of June 26-27, and we plan to set up on Friday, June 24, in our usual great location near Hemlock Corners in Henniker. Please come to help out and operate, and bring your family. We'll have separate stations and antennas for

80- through 6-meters, and a 2-meter "Fox Hunt". Someone is needed to be in charge of the GOTA station, which is a bonus-point setup that can operate 80-10-meters.

Gerry, K1BBQ, returns as F. D. Chairman, ably assisted by John, N1FOJ. A Planning / Business Meeting at my house on May25 will be followed by the Club Meeting of June 8, and a final planning on June 22. Try to attend!

Expect some delicious meals. We will be collecting money ahead, in order to accurately determine the food purchases. Deadline is the June 8 Club Meeting; please pay Treasurer, Scott Clay, N1ZGO. \$20 is for four meals,( Sat., lunch and supper, and Sunday, breakfast and lunch). Should you not want all these meals, let him know which ones you are paying for.

Let's hope for nice weather, no bugs, super

## Chip 'N' Dale Award

By Dale Clement, AF1T

Here's a Certificate that some of you may be close to qualifying for. Just submit a list of 2-Way Ham Radio Contacts on 6 Bands with Chip Taylor, W1AIM, and with Dale Clement, AF1T. That's a total of 12 Contacts, which can be made on any combination of Bands or Modes. Chip and I are active from 1.8-MHz through 10 GHz, so there are lots of possibilities. The list must include each Band Frequency (MHz), date, and UTC time of each contact. No QSL cards are needed.

Each award will be numbered consecutively. I can either mail it ( please enclose \$2 ) or present it to you at a club meeting. Let me know if you qualify!



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# **CVRC Fleamarket**

**Jim McElroy. NS1E**

By all accounts, our recent Hamfest was the most successful ever! Every table was sold, and we cleared over \$900. The speakers were well-received, and the NH Section Emergency Van attracted a lot of attention. The VE sessions went well, with several new licences and upgrades achieved. The food was popular; there were about four hotdogs left! The PA system made the drawing of door prizes go very well, and we had a lot of them. Buyers and vendors seemed to be very positive about the event, and we can hope for another success next year. The success was due in large part to the volunteers who made it all happen. My thanks and congratulations to you all!

## **Acoustic Heterodyning**

**By Ken Wilkins K1MID**

In the near future, maybe next month or maybe next year, you may be surprised to hear an advertisement for a product on the supermarket shelf as you walk by that product pushing your shopping cart. The sales pitch however will not be heard by other shoppers up or down the aisle. You will be the only person to hear the message !

When you get to the checkout register line you may hear a voice coming from above you suggesting that you look to your right for the special pricing on peanuts in the large can. Again you will be the only customer in the line to hear that message. When the next person moves into your position on the floor he will hear the same voice from above ( no, the voice is not god !!).

You will have just observed the latest audio experience in many years.

The technique used to accomplish this transmission of sound in a extremely directive manner is called "acoustic heterodyning". The process involves mixing 2 ultrasonic frequencies in a non linear medium. The non linear medium is air !

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Dale is trying to get a better idea on the types of programs you would like to see at our meetings. Please take the time to fill out the enclosed Programs form and return it to Dale, AF1T

Unlike audio at lower frequencies, say 20 to 10,000 hertz, ultrasonic frequencies of 40,000 to 100,000 hertz are easily confined to narrow beamwidths as they exit the ultrasonic transducer. Its like comparing the radiation pattern of a 20 meter beam with the pattern of a 10 gigahertz 8 foot diameter dish !

If two ultrasonic transducers each emit a single frequency such as 40 KHz and 41 KHz and these two frequencies are directed to the ear of a person , say ten feet away, the person will be subjected to each of the two fundamental frequencies, 40,000 hertz and 41,000 hertz. The person will hear neither of these two frequencies because they are above the range of human hearing. The nonlinear nature of air, a compressible fluid, will provide a "mixing" function to create the sum and the difference frequencies of the 40 KHz and 41 KHz fundamentals. The sum frequency will be 81 KHz which also cannot be heard by human beings. The difference frequency however will be 1 KHz which is right in the audio range of hearing.

The subject will hear a 1,000 cycle tone. The tone will be loud and clear. If the person moves to the left or right of the ultrasonic beam the amplitude will rapidly drop off.

The two different beams must converge near the subject in order for the beat frequency of 1,000 hertz to be produced by the air. A better and more efficient method of transmission is to use only one ultrasonic transducer and feed it with both the 40 KHz and 41 KHz electrical waveforms. The single transducer will now transmit both frequencies into the air as a coaxial column directly to the recipient's ear. This eliminates the need to try and have two independent columns of single frequency ultrasonic converge at the listener's ear.

Since no one wants to hear just a 1,000 cycle tone, we need to send modulation over the ultrasonic heterodyne link. This is easily accomplished by amplitude modulating a single ultrasonic carrier frequency of say 40 KHz with either single sideband or double sideband audio! The a.m. modulator is simply a mixer that, if fed with 2 KHz audio, will produce ultrasonic frequencies of 40 KHz, 42 KHz, and 82 KHz. The 82 KHz is useless.

The 40 and 42 KHz will convey the desired 2 KHz modulation audio (or whatever other frequencies such as speech or music) to the listener. Two kilohertz is the lowest beat frequency between these three frequencies.

Interesting effects are possible by not directing

the beam directly at the intended recipient. If you point the ultrasonic beam at a solid wall such that the beam will reflect off the wall toward the listener, the person will think the point source of the audio is coming from the wall.

This scheme also has other applications such as the ability to produce distortion free clean audio without the limitations of mechanical transducers such as woofers, tweeters and cross over networks. The perceived audio frequencies can go below the low end of human hearing and is produced with ultrasonic emitters that have very little moving mass.

High amplitude sub-audible low frequencies directed at human beings can have debilitating physical effects ! This can have all sorts of possibilities for crowd control and other sorts physiological mayhem. Frequencies in the range of 12 to 14 hertz can cause nausea , disorientation and other uncomfortable feelings.

I have not had the opportunity to witness a demonstration of acoustic heterodyning from a commercial source. The information above has been gathered from public information sources such as magazines, radio and my favorite web site - the U.S. governments patent office. As of this writing on January 18, 2004, I

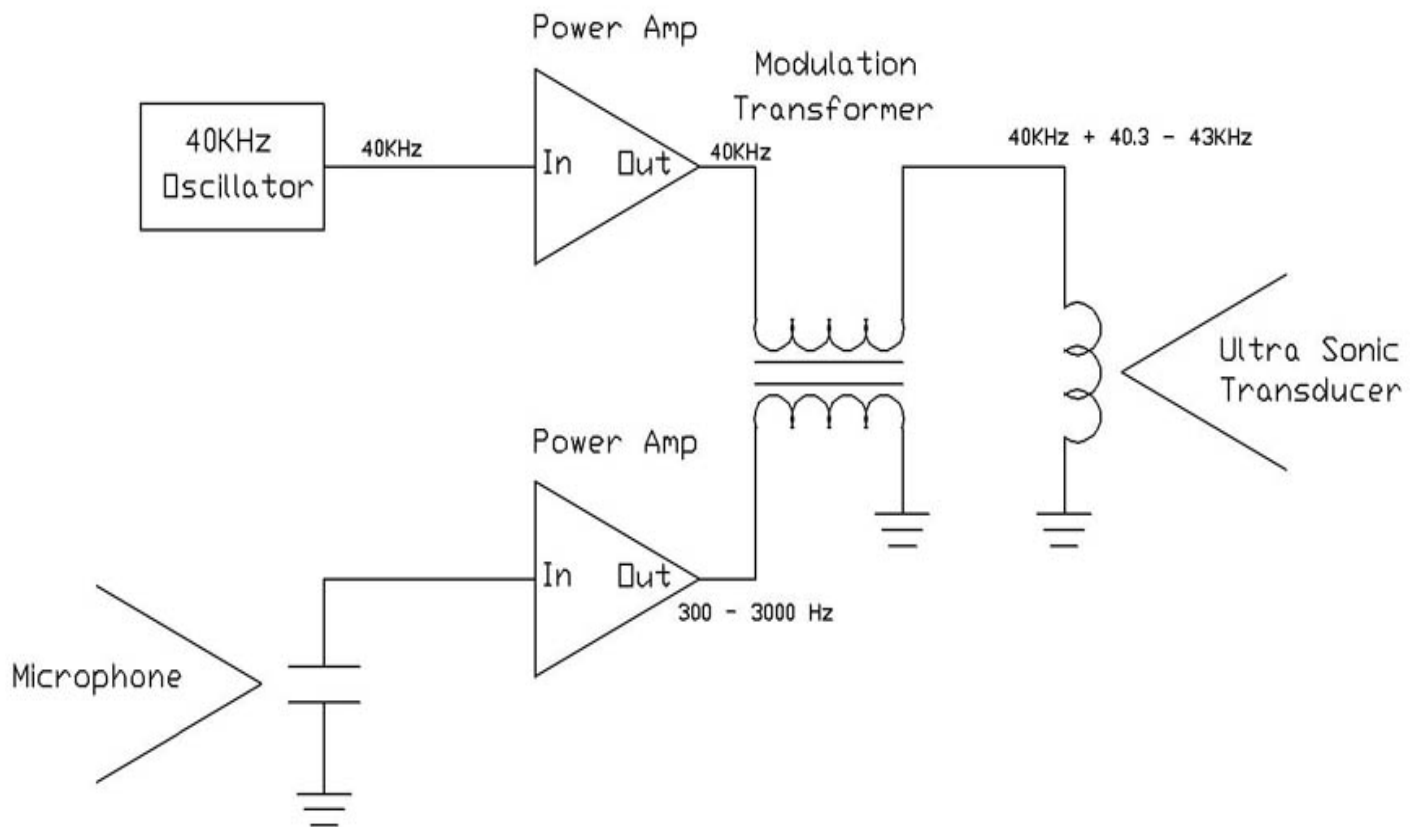
have given the scheme a try on the workbench.

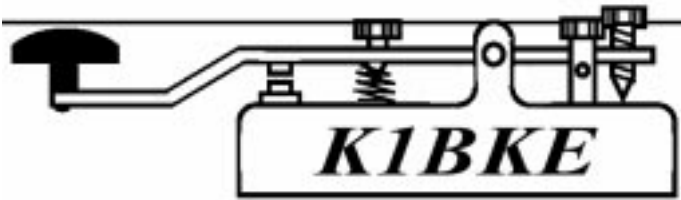
The test set up used a panasonic 40KHz transducer from digikey ,which has been in my inventory for about 5 years, and a 20 year old signal generator inherited from a former employer. The generator covers an adjustable output range up to 5 MHz and has a built in fixed frequency 400 Hz adjustable gain AM modulator. The maximum output voltage from the generator only drives the transducer to about 10 milliwatts. The transducer can handle about 130 milliwatts.

By adjusting the generator's output frequency to 40 KHz and cranking the 400 Hz modulation up close to 100% ,the tone is heard when the transducer is in close proximity to my ear. The beam width is extremely narrow, but the level is very low. The next step is to amplify the generator's output level from its 5 volt rms maximum to the input limit of 20 volts for the transducer. This will allow the transducer to output about 130 milliwatts.

If I get good results with more power output ill try to bring a demo box to the next club meeting.

One interesting observation , the 400 Hz tone as heard in my opposite ear sounds slightly different in frequency. Is there something amiss with the test setup or should i schedule an appointment with my ear doctor?





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**CVRC CLUB CALL: K1BKE**

CVRC operates:

K1BKE/Rptr 146.295/146.895

K1BKE:CENTNH 145.57 Packet Node

**CVRC OFFICERS**

President	N1FOJ, John Moore	746-4817
Vice President	AF1T, Dale Clement	428-3840
Treasurer	N1ZGO, Scott Clay	
Secretary	Don Curtis, N1ZIH	927-6012
Trustee of club call	W1JS, Jack Sheehy	529-5635
K1BKE Repeater trustee		
Packet node trustee	K1JY, Lindsay Collins	495-3983

**ACTIVITIES & COMMITTEES**

Flea Market	JimMcElroy, NS1E	428-7436
Programs	Dale Clement, AF1T	428-3840
V.E. Sessions	Al Bardwell, NS1O	228-1407
License Classes	Need Volunteer	
	783-9294	
Field Day	Jerry Blanchard, K1BBQ	
	227-0541	
Outgoing QSLs	John Moore, N1FOJ	746-4817
Historian	Louise French, K1LAS	428-7253
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