THE COMPASS

THE OFFICIAL NEWSLETTER OF THE GREAT SOUTH BAY AMATEUR RADIO CLUB

VOLUME 30 ISSUE 10 *"..serving the community through Public Service."* *Oct., 2003*

GSBARC 2003 OFFICERS

President: Walter Wenzel, KA2RGI
Vice Pres: David Wandell, N2UHR
Treasurer: Tom Carrubba, KA2D
Corr. Secretary: Scott Verity, KC2FBV
Rec. Sec: PattyLynn Wandell, KC2AUX
Director 1: Dom Stengele, WA2UJI
Director 2: Frank Spinazzola, KC2EGK
Director 3: Phil Lewis, N2MUN
Director 4: Charles Rousselet, N2MZK

UPCOMING EVENTS

GSBARC General Meeting – 8:00PM
Thursday October 30, 2003
Thursday November 20, 2003
Thursday December 18, 2003

GSBARC VE – 12:00 PM
Sunday November 23, 2003
No December Session Scheduled

GSBARC Board Meeting – 8:00 PM
Thursday November 06, 2003
Thursday December 04, 2003

GSBARC Open House 12:00 – 2:00PM
Every Saturday @ Town Hall EOC

NETS

Newsline Report -	
Monday 7:00 PM	146.685/R
Club Info Net -	
Monday 7:15 PM	146.685/R
DX/Contest Info -	
Monday 7:15 PM	146.685/R
TOBARES Net -	
Monday 8:15 PM	146.685/R
Swap 'n Shop Net -	
Tuesday 7:30 PM	146.685/R
10 M Net -	
Tuesday 8:00 PM	28.320

REPEATERS

2 M	146.685/146.085	PL 110.9
1 1/2 M	223.860/222.260	PL 131.8
70 CM	440.850/445.850	PL 114.8
70 CM	447.625/442.625	PL 114.8*

*Repeater owned by Chris Baumgartner, WA2AMX

President's Message

By Walter, KA2RGI

Annual Club Elections

Well it is that time again to contemplate your choice for club officers. This month we will be presenting the first slate of nominations for next months elections. If you are interested in being part of the nomination process please let Rob Smithline, KC2KMD know your choice or desire. At this month's meeting we will present the list of nominations. This is the time for you make your thoughts known.

November & December Meeting date changes

Please remember that the dates for the November and December Meeting have to be moved up 1 week because of the Holidays. The November meeting will be on the 20th (3rd Thursday) and the December meeting will be on the 18th. This will move the Exec. Meetings up a week also to Nov. 6 and Dec. 4. The TOBARES Mtgs will also be moved to the 2nd week of the month or Nov. 13 and Dec. 11.

End of the year Party

It is time to think of the end of the year gathering and think about what we would like to do this year. We can have our function in the basement of the Town Hall or plan it to be elsewhere. What would you like to do. Do you want the time moved forward to say 7:00 PM instead of the normal time of 8:00 PM. How do you feel?

Classes, Meeting Topics & Newsletter Articles

What would you like to learn more about? Basic computers? Contesting or DX? Morse Code? Let me know so we can schedule classes. Also let me know what time is good for you.
Do you have any ideas for topics for club meeting speakers or any articles for the newsletter? If you do, let us know so we can add them or if you can please supply them.

GSBARC VE Exam Schedule

May 25	Babylon Town Hall EOC – 12 Noon
June	NO VE - Field Day -6/28-6/29Babylon Town Hall
July 27	* New **Tech Test** eff. July 1 Babylon Town Hall EOC – 12 Noon
Aug 24	Babylon Town Hall EOC – 12 Noon
Sept 28	Babylon Town Hall EOC – 12 Noon
Oct 26r	Babylon Town Hall EOC – 12 Noon
Nov 23	Babylon Town Hall EOC – 12 Noon
December	NO VE - ***Season's Greetings***

NEWS OF INTEREST

CLUB APPAREL

Frank "Spin", KC2EGK has club apparel for sale. Please contact him for hats, jackets or shirts.

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CLUB NET SCRIPTS

If anyone is interested in a copy of the basic 2 meter Monday night net script for GSBARC give Dave, N2UHR a call on w2gsb/r, home: 631-842-6340, or via email at: n2uhr@arrl.net

'73 de Dave, N2UHR!

Committee Chairpersons	
Club Apparel –	Frank "Spin", KC2EGK
Club Station/Equip –	Walter, KA2RGI
DX/Contesting –	Tom, KA2D
Education –	Phil, N2MUN
Hamfest –	Walter, KA2RGI
Library –	Dom, WA2UJI
Membership –	Tom, N2MIG
Newsletter –	Gene, KB2TXZ
Home page –	Tom, KA2D
DX Cluster –	Tom, KA2D
Repeaters –	Walter, KA2RGI
VE Sessions –	Tom, KA2D

Happy Birthdays For Oct. 2003
Another year older, Another year smarter

Anthony, AA2FB
Tom, N2MIG
Pete, N2GBM
Frank, KC2EXO
Candice, N2QES

If your birthday is not listed we may not have all the info in our database

WebSite of the Month

Radio or computer related

The following sites are weather related.

http://www.erh.noaa.gov/er/okx/

http://www.spaceweather.com/

http://iwin.nws.noaa.gov/iwin/graphicsversion/rbigmain.html

http://weather.unisys.com/

http://ccc.atmos.colostate.edu/

Editors Note

If you have any topics or websites of ham or computer related interests you would like to see appear in the newsletter please email me at ehowley@optonline.net

MINUTES OF THE GENERAL MEETING
BABYLON TOWN HALL EOC LINDENHURST, NY
Thursday September 25, 2003
called to order by KA2RGI at 8:00 PM

BOARD MEMBERS PRESENT

President	KA2RGI	Walter Wenzel
Vice President	N2UHR	Dave Wandell.
Recording Secretary	KC2AUX	PattiLynn Wandell
Corresponding Sec.	KC2FBV	Scott Verity
Director 1	WA2UJI	Dom Stengele
Director 2	KC2EGK	Frank Spinazzola
Director 3	N2NUM	Phil Lewis
Director 4	N2MZK	Charles Rousselet

BOARD MEMBERS NOT PRESENT:
Treasurer KA2D Tom Carrubba

ADDITIONAL MEMBERS PRESENT:
Bud N2QAV, Leo W2LJW, Jo Ann N2NQQ, John KA2UJP

RECORDING SEC. REPORT: PattiLynn, KC2AUX
No opposition to the minutes

CORRESPONDENCE SEC. REPORT: Scott, KC2FBV
Bank Statement - checking, new membership application for KB2YKQ, QSL's from Fire Island Lighthouse.
Phil N2MUN mentioned that JOTA weekend will be October 18. The scout leader N2JZW and his scouts are interested in participating. GSBARC will support them.

TREASURER'S REPORT: Tom, KA2D

Checking: $1991.95
CD: $2793.54
Grand total of all funds: $4785.49

APPAREL: Spin, KC2EGK
Special order jackets are due in the next few days for P/U. "Revisable Jackets " will not have call sign since call sign is backwards when reversed.

CLUB STATION & EQUIPMENT: Walter, KA2RGI
All Ok N2IMF has delivered the computer for the club station. KA2D said he will reimburse him for the computer for the club station

DX & CONTESTING: Tom, KA2D
K2TV has been reading information on the club net, when he can. Everyone is invited to share his or her D.X. with the net. ARRL. has DX. bulletins available online.
For more current DX bulletins check in to KA2D-8 on 145.07. Also check into W2GSB DX Cluster.

EDUCATION: Phil, N2MUN
Walter, KA2RGI is teaching the Technicians classes which began on Tuesday September 9tth and will run until Oct. 21st from 7:30 – 9:30. There are 6 students currently attending this class. Anyone interested in learning Morse code let KA2RGI know.

LIBRARY: Dom, WA2UJI
Information regarding NYS 397 Vehicle and Traffic Law has been added to the library. A request was made that members wishing to take out books please enter them in the Library register accordingly.

MEMBERSHIP: Tom, N2MIG
Members are asked to submit their email address if they have one. New members KB2YKQ and KB2TCH.

NETS:
News line: On the air with MP3 format.
2-meter club info net: On the air. DX report by K2TV when he is available. This net needs backup net control. Now will start at 7:30pm
Swap –n- Shop: On the air. Check-ins are light.
10 meter net: KA2CAQ, Walter is helping with the net.

NEWSLETTER: Gene, KB2TXZ
The August Birthday's were Cliff -KC2EXP, Walter- KA2GI, Scott-KC2FBV, and Phil-N2MUN.
Deadline for submissions to the newsletter is the 10th of the month. New editor of the newsletter is KB2TXZ (Gene).

HOMEPAGE/ WEBSITE/ DX-CLUSTER: Tom, KA2D
All OK at this time

REPEATERS: Walter KA2RGI
4 new antenna's mounted on new tower. There is only one tower at this time.
144: Online. Circulator will be purchased this month. Motion was made by N2UHR to purchase a second micore setup with upgrade. Motion was seconded by Robert, KC2KMD. Voted on and excepted by majority of club members.
220: On the bench with audio issues, may need replacing.
440: will get a new amplifier and upgrade to the controller.

VE SESSIONS: Tom, KA2D
2003 Test Fee is $12.00. Next VE test session will be held on September 28th at Town Hall. A special VE session will be held the following Tuesday Sept. 30th as requested for a U.S. serviceman based in Japan.

SPECIAL COMMITTEE REPORTS:
Club is looking for someone to chair Election Committee
Control Operators needed for the Repeater.

ARES/RACES: Walter, KA2RGI
October 4th is the Great South Bay Run @ Bayshore Marina stating @ 8 AM.
October 5th is the East Farmingdale Firehouse open house. Setup will be at 9 AM. Thank to all the Amateur Radio operators who participated in the Republic Airport Drill on September 13th. There was good response on simplex during the Blackout.
October 19th there will be an Emergency Services SET.
http://www.tobares.org

HEALTH & WELFARE/ANNOUNCEMENTS:
AB2JW back home and doing well after edema in his leg due to a blood clot.
Cleo, N2YAY is not well. Joe N2RBO is not well.

NEW BUSINESS:
Club is putting together a CD of its history. Contact Scott, KC2FBV with anything you want to contribute.

Meeting was adjourned @ 9:37PM by KA2RGI
Respectfully submitted by: PattiLynn, KC2AUX

GREAT SOUTH BAY AMATEUR RADIO CLUB
MINUTES OF EXECUTIVE BOARD MEETING

Thursday 0ctober 9, 2003 called to order by KA2RGI at 8:07PM

BOARD MEMBERS PRESENT

President	KA2RGI	Walter Wenzel
Vice President	N2UHR	Dave Wandell
Treasurer	KA2D	Tom Carrubba
Recording Secretary	KC2AUX	PattiLynn Wandell
Corresponding Sec.	KC2FBV	Scott Verity
Director 1	WA2UJI	Dom Stengele
Director 2	KC2EGK	Frank Spinazzola
Director 3	N2NUM	Phil Lewis
Director 4	N2MZK	Charles Rousselet

ADDITIONAL MEMBERS PRESENT:
Pete N2GBM, Jay N2PIK, Steve K2JY, Robert KC2KMD

RECORDING SEC. REPORT: PattiLynn, KC2AUX
KC2EGK made a motion to suspend reading of the minutes. WA2UJI seconded.

CORRESPONDENCE SEC. REPORT: Scott, KC2FBV
Bank Statements, Catalog, Lighthouse Deopt (ARLS), LARC newsletter, Postcard from KC2EGL who is on vacation in Ireland stating he could not find a station to operate from. Notice from N2FF; Hudson Division Awards Dinner 2003. Payment Notice from Marsh Affinity Group; Club Liability Insurance due 12/01/2003.

TREASURER'S REPORT: Tom, KA2D
Checking: 2047.00
CD: 2793.54
Total: 4840.54

APPAREL: Spin, KC2EGK
Sweatshirts are about to be ordered

CLUB STATION & EQUIPMENT: Walter, KA2RGI
Club has a new computer. In addition the club has a Laser Jet printer donated by Pete, KC2HLI.

DX & CONTESTING: Tom, KA2D
CQWW SSB October 25th and 26th
FCC invites comments on additional Morse code-related petitions via the web http://www.fcc.gov/cgb/ecfs/
For more current DX bulletins check in to KA2D-8 on 145.07.
Also check into W2GSB DX Cluster.

EDUCATION: Phil, N2MUN
Walter, KA2RGI is teaching the Technicians classes on Tuesday nights from 7:30 – 9:30. Anyone interested in learning Morse code let KA2RGI know.

LIBRARY: Dom, WA2UJI
Nothing new. A request was made that members wishing to take out books please enter them in the Library register accordingly.

MEMBERSHIP: Tom, N2MIG
Members are asked to submit their email address if they have one. New members KB2YKQ and KB2TCH.

NETS:
News line: Back on the air with MP3 format.
2-meter club info net: Back on the air. DX report by K2TV when he is available. This net needs backup net control. Now will start at 7:30pm
Swap –n- Shop: Now back on the air.
10 meter net: No info at this time

NEWSLETTER: Gene, KB2TXZ
Deadline for submissions to the newsletter is the 10th of the month. New editor of the newsletter will be KB2TXZ (Gene). There will be an Aug./Sept. compass published soon.

HOMEPAGE/ WEBSITE/ DX-CLUSTER: Tom, KA2D
WEB: N2UHR and KC2KMD reported gsbarc.org was not present online. There was a problem from Oct 4 to Oct 5. Change of servers by host. They did not put GSBARC files in correct folders. All fixed now. Thanks David W2DHM. Always remember there is a mirror site at ww.qsl.net/ka2d/gsbarc.html. Please report any problems to Tom KA2D.

REPEATERS: Walter KA2RGI
4 new antenna's mounted on new tower
144: Back online, needs to be adjusted.
220: On the bench with Audio issues
440: will get a new amplifier and upgrade to the controller.

VE SESSIONS: Tom, KA2D
2003 Test Fee is $12.00. Next VE test session will be held on October 26th at Town Hall.

SPECIAL COMMITTEE REPORTS:
Club is looking for someone to chair Election Committee
Holiday Party coming soon.
Club picnic had a nice turnout.

ARES/RACES: Walter, KA2RGI
October 19th there will be an Emergency Services SET.
There was good response on simplex during the Blackout.
September 11th reminds us to be prepared.
September 19th thru September 21st will be the "Air Show".
http://www.tobares.org

HEALTH & WELFARE/ANNOUNCEMENTS:
Cleo, N2YAY is not well. Joe N2RBO is not well.

NEW BUSINESS:
Club is putting together a CD of its history. Contact Scott, KC2FBV with anything you want to contribute.

Meeting was adjourned @ 9:02PM by KA2RGI
Respectfully submitted by: PattiLynn, KC2AUX

AN INTRODUCTION TO FOXHUNTING

by Peter Parker VK3YE - first appeared in Amateur Radio, August 1998

Foxhunting, amateur radio direction finding (ARDF) or hidden transmitter hunting is a fun activity where people compete to be the first to find a hidden radio transmitter. They do this by using receivers with directional antennas to hone in on the transmitted signal.

Apart from the excitement of the hunt itself, those who like making small receivers and directional antennas will enjoy it for the challenge of building equipment that is rugged, reliable and does not give false readings. Nevertheless, constructional ability is not required to enjoy the activity - many beginners use hand-held VHF transceivers or scanners to receive signals from the 'fox' transmitter.

Regular foxhunts are held by local radio clubs or foxhunting groups. Participants may go on their own or be part of a team. Hunts are conducted either on foot or in vehicles. An amateur transmitting licence is *not* necessary to participate.

A variant of foxhunting is Amateur Radio Direction Finding (ARDF). This is a rapidly growing international sport and calls for a degree of physical fitness not possessed by many amateurs. Details on ARDF are presented elsewhere in this article.

BANDS TO USE

Most foxhunts use the two metre (144 MHz) band. The national ARDF frequency is 145.300 MHz, though some groups still use other frequencies. There is also some ARDF activity on 3.5 MHz. Low power transmitting and receiving equipment for this band is very easy to build. Compact directional receiving antennas for 3.5 MHz are also interesting projects. Because most amateurs already own a portable VHF scanner or transceiver, this article concentrates on foxhunting on the two metre band.

RULES

Except for ARDF, which is an international sport (see end of article), local foxhunt groups set their own rules. These may include things like driving carefully and requiring that the transmitter be within a certain distance of the starting point. Other rules are fairly informal.

The person setting the fox goes off and hides the transmitter. Meanwhile, participants ('hounds') gather at the starting point. They may monitor a local repeater for liaison purposes. When the transmitter has been hidden, the fox setter switches it on and announces that the fox is transmitting and that the hunt has started.

Hounds first need to know which direction to travel. They madly swing their beams around until they can get a bearing on the fox's signal. They may then consult a map and start heading in the direction of the signal.

The first individual or team that finds the fox is the winner. Those who have seen the fox transmitter walk away from it to avoid giving clues to following teams. The transmitter is turned off when the last hound finds the fox or announces on the liaison frequency that they have given up. The winning station or team is then entitled to set the next fox. Either another hunt is run or participants may socialise at a participant's house or cafe.

THE 'FOX'

The transmitter used in the foxhunt must be compact and rugged. Its frequency should be stable (crystal control is ideal) and be able to run for several hours off a nicad or sealed lead acid battery. RF output powers as low as 20 milliwatts are satisfactory for pedestrian-based events of a few hundred metres. Higher powers (1 to 5 watts) are better for longer hunts. A fox transmitter with two or three RF output power settings is desirable to save power and/or fool the competitors.

Because many people will be using FM receivers, it is desirable that the fox's signal is frequency modulated with an audio tone. This tone can be keyed to transmit a Morse ID. Programmable ICs are often used to send the Morse. However, 20 second digital message recorders are so cheap nowadays that these are the logical choice for those wishing to build a Morse or voice ID for a transmitter.

Antennas for fox transmitters can be almost anything. A quarter wavelength piece of wire is recommended for beginners. However more experienced groups have used fences, bridges or sheds as antennas. The use of directional beam antennas can also be worthwhile. This is because they can fool competitors into thinking that they are very close to the hidden transmitter. Also competitors can be given misleading bearings by orienting the beam so that it bounces the signal off a large building or hill some distance away. Other interesting effects can be had by experimenting with the antenna's polarisation. Effort should be made to camouflage the antenna and feedline to make finding the fox harder. For example, a

tree branch and fencing wire can be made into a yagi antenna that is almost invisible when concealed in a tree. Similarly, a wire antenna could be dunked in a lake or river.

RECEIVING EQUIPMENT

This is a matter for the individual competitor. The equipment used depends on whether the hunt is vehicle-based or pedestrian-based.

Competitors in vehicle-based hunts typically have some sort of steerable antenna mounted on the car. Some keen hunters have bored a hole through the roof of their vehicle to allow for a rotatable pole for the antenna. Others use an antenna on the roof rack or a vertical piece of dowelling protruding through a passenger window. This last suggestion is preferred for those without beam heading indicators installed for reasons explained later.

A two or three element quad or yagi is the most common choice for competitors. This should be optimised for maximum front-to-back ratio rather than forward gain. A sharp null off the back or side can be very useful in direction finding. A suitable antenna was described in Novice Notes February 1997.

It is important to know the direction that the car-mounted beam is heading. Some people use remote-control motors and indicators. However, this is not necessary for the beginner. A simple approach that works well is to have a nail knocked in to the side of the antenna support dowel that faces the direction at which the antenna is aimed. This method can course only be used where the antenna support dowel protrudes through the passenger window.

Inside the vehicle is a switchable RF attenuator. This is used when the signal from the fox is very strong but you still need to get a bearing. Descriptions of suitable attenuators appear in the standard handbooks. Good quality construction is important to reduce signal leakage.

Lastly there is the receiver. This should have an s-meter so that it is possible to get an indication of the strength of the received signal. SSB receive capability may also be desirable. A reasonably small multimode two metre transceiver (eg Yaesu FT290R) is ideal for this application. Alternatively, a home-made receiver with a variable tone output to indicate received signal strength could be used instead.

The equipment mentioned above is of course the ideal. However, do not be put off if all you have is an FM handheld transceiver - foxhunts have been won by stations using these as the receiver. Tuning off frequency is sometimes a useful technique to effectively attenuate the received signal.

In many cases, vehicles cannot be parked close to the fox's hiding spot. Alternatively, signals may be so strong as to render the vehicle-mounted direction-finding system ineffective. The solution is to use a hand-held 'snoop loop'. This consists of a hand-carried two or three element yagi, attenuator and simple receiver. This may either be a handheld transceiver, portable multimode transceiver, or home-made receiver. Especially important is effective shielding to prevent leakage into the receiver other than through the antenna connection.

Pedestrian hunters are limited by the size and weight of equipment that can be carried, especially if the walk will be several kilometres. A compact multi-mode transceiver or homebrew receiver, attenuator, two-element yagi and map are all desirable for the pedestrian hunter. If the attenuator is built properly and the transceiver is well-shielded, such equipment can be used to locate the transmitter to within a metre.

Often the last hundred metres of a fox hunt can take much longer than travelling the several kilometres required to reach the general vicinity of the transmitter. This is particularly so if the transmitter, feedline and antenna are well hidden and signals are strong. Effective triangulation of the location of the fox (including searching up and down, using horizontal and vertical polarisation and careful observation) is important here. It is quite possible for a team to be the first to reach the general area but squander this advantage to later arrivals by having poor equipment and/or poor powers of observation. Always remember that the signal radiates from the antenna and not the fox transmitter. Thus all bearings will be towards the antenna. For this reason, the antenna is often the first part of the transmitting equipment located and you will need to follow the feedline along to find the transmitter itself.

HIDING SPOTS

To many, finding novel and unusual hiding spots is the best part of foxhunting. There is a peculiar pleasure in hiding a transmitter that takes other people several hours to find. If you join a foxhunting group or team, you will hear many anecdotes about past hunts where transmitters were hidden in strange places. The following are a few ideas for those whose turn it is to hide the transmitter.

- Buried underground (use a fence as an antenna)
- Under a bridge or underpass
- On a peninsula, near (or in) the water

- Under a skateboard (preferably in use)
- Near a sewage outflow
- In a bus or train carriage (not necessarily stationary!)
- Up a tree
- In a rubbish bin
- On a hill without vehicle access
- Shopping trolley in/near shopping centre
- Near a police station
- Close to a pager transmitter or broadcast station
- Inside a hollow log

Where possible foxhunts should be held where there are concentrations of people. Examples include main streets, shopping and restaurant areas. The reason for this is to increase the visibility of amateur radio and foxhunting in the general community. Pedestrian foxhunters are normally in a better position to answer questions from the public than those in vehicles.

ACKNOWLEDGMENTS

I would like to thank Wally Watkins VK4DO, Ron Graham VK4BRG and Neil Pickford VK1KNP for their assistance in the preparation of this article.
