

THE COMPASS



THE OFFICIAL NEWSLETTER OF THE GREAT SOUTH BAY AMATEUR RADIO CLUB

VOLUME 32 ISSUE 2

“..serving the community through Public Service.”

February, 2004

GSBARC 2004 OFFICERS

President: Walter Wenzel, KA2RGI
Vice Pres: David Wandell, N2UHR
Treasurer: Tom Carrubba, KA2D
Corr. Sec.: Scott Verity, KC2FBV
Rec. Sec.: Steve Schwenker, K2JY
Dir. 2004: Charles Rousselet, N2MZX
Dir. 2004: Jay Eichner, N2PIK
Dir. 2005: Dom Stengele, WA2UJI
Dir. 2005: Robert Smithline, N0UH

Upcoming GSBARC Events

Board Meeting – 2nd Thursday 8:00 PM

March 11
April 8
May 13

VE Session – 4th Sunday 12:00 PM

March 28
April 25
May 23

General Meeting – Last Thur. 8:00PM

February 26
March 25
April 29

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 7:30 PM 146.685/R

DX/Contest Info -

Monday 8:00 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

President's Message

By Walter, KA2RGI

WILL SPRING ARRIVE SOON?

At the beginning of the month the ground hogs saw their shadows so we will have a more winter. I just hope it will not be as cold as it has been. Please keep in touch with the club and listen to the repeater for any special weather nets that might be brought up. Most of the time, the nets that are brought up are standby nets so just listen and report any changes from the National Weather Services forecasts.

UPCOMING EVENTS

Suffolk County Half Marathon:

March 28, 2000 7:00 AM Assignment & Update Meeting in the classroom below the gym at the Annerman Campus of Suffolk County Community College on Nichols Rd.. The event is over by 12 Noon except for the awards presentations. Please remember the course is closed to traffic by 8 AM until 12 Noon.

Hamfest:

We have selected a date for our upcoming Hamfest at the Massapequa Sunrise Mall, it will be May 23, 2004 and it will run from 8:00 AM to 12 Noon. At Noon we will have to suspend the event because of the time limit we have been given for the use of the facilities.

UNCOMPLETED ITEMS FROM JANUARY MEETING

Since we did not have a quorum to conduct the business portion of the January meeting we will have to handle that portion at this month meeting also. This means we have to discuss a budget for the year and also talk about some expenditures.

GUEST SPEAKER

Our guest speaker for the February meeting will be Peter Penta, NA2P and he will be telling us what is happening and what is not with satellite communications.

Getting Better Each Year

N2UHR, Dave
KB2ZGS, John
W2FX, Len
W2PB, Paul
KB2IEV, Anthony
K2TV, Rob
N2QXK, Michael
N2XOB, Julie Ann
WB2TWL, Frank
KB2PZR, Dianne, SK

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

News of Interest

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@oponline.net

MINUTES OF THE GENERAL MEETING BABYLON TOWN HALL EOC LINDENHURST, NY

Thursday December 29, 2004

No Minutes were taken because of lack of quorum.

MINUTES OF THE EXECUTIVE BOARD MEETING BABYLON TOWN HALL EOC LINDENHURST, NY

Thursday February 12, 2004

Meeting called to order by Walter, KA2RGI at 8:00 PM

BOARD MEMBERS PRESENT:

President	KA2RGI Walter Wenzel
Vice President	N2UHR David
Wandell	
Recording Secretary	K2JY Steve
Schwenker	
Director 2004	N2MZK Charles
Rousselet	
Director 2004	N2PIK Jay
Eichner	
Director 2005	WA2UJI Dom Stengele
Director 2005	N0UH Robert
Smithline	

BOARD MEMBERS NOT PRESENT:

Treasurer	KA2D Tom
Carrubba	
Corresponding Secretary	KC2FBV Scott Verity

OTHER CLUB MEMBERS PRESENT:

N2MIG, K2LI, N2GBM

PREVIOUS MINUTES: Recording Secretary - Steve, K2JY
No minutes were taken at Jan. 29, General Meeting because of a lack of a quorum of Club Officers.
No club business was able to be transacted.

CORRESPONDENCE REPORT: Corresponding Secretary - Scott, KC2FBV
Nothing new to report.

TREASURER'S REPORT: Treasurer - Tom, KA2D
Nothing to report as Tom KA2D was not present at board meeting

COMMITTEE REPORTS:

APPERAL: Chairperson – Rob, N0UH
Nothing new to report.

CLUB STATION AND EQUIPMENT: Chairperson – Walter, KA2RGI

A discussion was held about buying another Kenwood 570 to add to the clubs existing equipment, a Kenwood TS 570 and a Kenwood TS 430. Steve, K2JY will be looking into the price of another unit and will report his findings to the membership at the general meeting.

DX & CONTESTING: Chairperson – Tom, KA2D
Nothing new to report

DX CLUSTER: Chairperson – Tom, KA2D
Cluster-up and running and nothing new to report.

EDUCATION: Chairperson – Walter, KA2RGI
Next general class will be held on Tuesday Feb 17 at 7:30 pm. Morse code classes will be held at Walter's new shop, 421 Broadway, West Babylon on Feb. 21.

LIBRARY: Chairperson – Dom, WA2UJI
Nothing new to report.

MEMBERSHIP: Chairperson – Tom, KA2D
People are renewing their membership and an updated list will be out soon. N2SLM has moved back into the area and also rejoined the club.

NETS:

We are looking for anyone that would be interested in helping out with the club info net on Monday nights. Back up control operators would be helpful. If you are interested, let us know and we will provide you with the standard script used for the net. The Tuesday night ten meter net and the swap and shop net would always appreciate more check ins.

Newsline Report: NCS – Dave, N2UHR Nothing new to report.

2 m Net: NCS – Dave, N2UHR Nothing new to report.

Swap n Shop: NCS – Bud, WA2QAV Nothing new to report.

10 m Net: NCS – Brian, N2NGE Nothing new to report.

NEWSLETTER – COMPASS: Chairperson – Gene, N2TZX

REPEATERS: Chairperson – Walter, KA2RGI

Nothing new to report on the problems with the 2 meter repeater. The 220 and 440 machines will be worked on as time permits

SPECIAL EVENTS:

Field Day: Chairpersons – Position Open

We are looking for field coordinators to help with getting ready for field day. Any help would be appreciated.

Hamfest: Chairperson – Walter, KA2RGI

The hamfest will be held rain or shine on May 23, at the Massapequa Sunrise Mall, starting at 8 am and will end at 12 noon. Any help would be appreciated.

Air Power Museum: Chairperson – Bud, WA2QAV
Nothing to Report

Fire Island Lighthouse Weekend: Chairperson – Tom, KA2D
Nothing to Report

Nothing to Report

Club Picnic: Chairperson – Walter, KA2RGI

Nothing to Report

End of the Year Party: Chairperson – Walter, KA2RGI

Nothing to Report

VE SESSIONS: ARRL Liaison – Tom, KA2D

The next VE session is Feb. 22 at EOC.

WEBSITE - HOME PAGE: Chairperson – Tom, KA2D

Up and running, nothing new to report

SPECIAL COMMITTEES:

Antenna Committee: Chairperson – Open Position

Nothing new to report

Open House: Chairpersons – Dave, N2UHR

Nothing new to report

Public Relations: Chairperson – Walter, KA2RGI

Nothing new to report

Technical Committee: Chairperson – Walter, KA2RGI

Nothing new to report

ARES/RACES: EC/RO – Walter, KA2RGI

ARES cards will be available at the TOBARES meeting next week Feb. 19.

March 28 - 7:00 AM to Noon - Suffolk County Half Marathon.

GUEST SPEAKERS & PROGRAMS: Chairperson – Dave, N2UHR

Peter Penta, NA2P will be our guest speaker at the general meeting. His topic will be on satellite operations.

HEALTH AND WELFARE: Chairperson – Scott, KC2FBV

Ryan, KC2LKS is home and recovering from his broken leg. We wish the best and hope to see him soon.

OLD BUSINESS:

The 2004 budget will discussed at the next general meeting, and a proposal to purchase a video projector for the club will also be discussed.

NEW BUSINESS:

No new business was brought up.

MOTION TO ADJOURN:

A motion to adjourn the meeting was made by Rob, N0UH and seconded by Tom, N2MIG.

Meeting was adjourned at 8:47 PM

Respectfully submitted by

Steve Schwenker K2JY

Recording Secretary

WebSite of the Month

Radio or computer related

NY RACES - Radio Amateur Civil Emergency Service

<http://www.nysemo.state.ny.us/races/races.html>

Guidance for Radio Amateur Civil Emergency Service

<http://www.fema.gov/library/civilpg.shtm#Civil%20Preparedness%20Guide>

The Great South Bay Amateur Radio Club

<http://www.gsbarc.org/tobares.html>

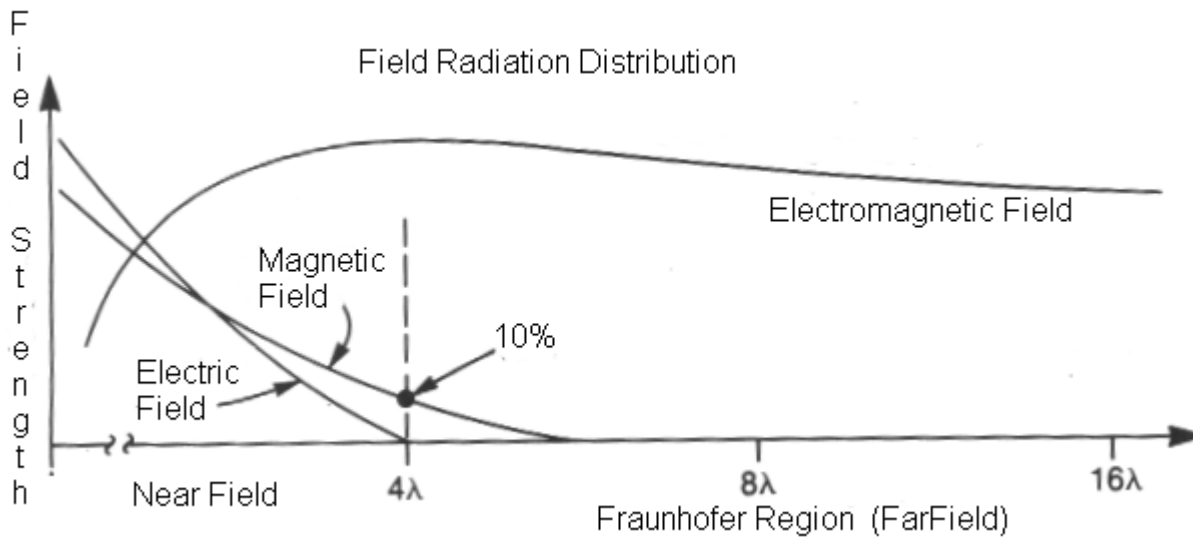
Antenna Systems

Part One

The Basics

The *antenna gain* is a measure of how well the antenna will send or pick up a radio signal. This "gain" is measured in decibels-isotropic (dBi) or in decibel-dipole (dBd). The *decibel* is a unit of comparison to a reference. The letter following the "dB" indicates the reference used. The dBi is a unit measuring how much better the antenna is compared to an isotropic radiator. An *isotropic radiator* is an antenna which sends signals equally in all directions (including up and down). An antenna which does this has an 0dBi gain. The higher the decibel figure the higher the gain. For instance, a 6dBi gain antenna will receive a signal better than a 3dBi antenna. A dBd unit is a measurement of how much better an antenna performs against a dipole antenna. As a result a dipole antenna has a 0dBd gain. However a dipole antenna typically has a 2.4dBi gain as dipole antenna are better than isotropic radiators. Any dBi figure may be converted to dBd by adding 2.4. The radio antenna industry tends to use dBi to specify gain of whip antenna and dBd for all others. However this is not a firm rule and care must be taken when reading manufacturer specifications which give gain in "dB" without specifying the reference as either a dipole or isotropic radiator. All antenna have identical transmit and receive characteristics. That is, if it is a poor transmitter it will be equally poor at receiving.

The radiation pattern of an antenna has a *near field* and a *far field*. The near field is composed of electric and magnetic force fields. This holds true to about 4 wavelengths from the radiator, and then the predominate radiation is the electromagnetic field.

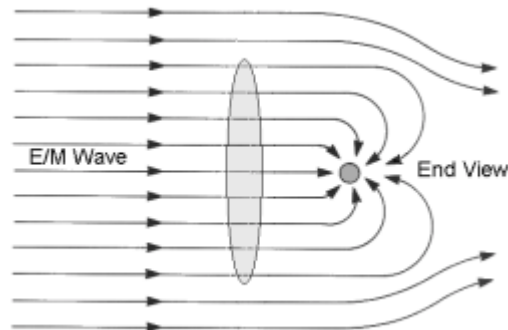


There are basically two categories of antenna, omnidirectional and unidirectional. An omnidirectional antenna is one which radiates in all directions. A *unidirectional* antenna radiates in one direction only. An *omnidirectional* antenna should not be confused with an isotropic antenna for while an isotropic antenna will radiate in all 3 dimensional directions an omnidirectional antenna may not radiate vertically (up or down).

Directionality is closely related to antenna gain. Antenna obtain more gain by concentrating their energies in a direction. Omnidirectional antenna (non-directional) try to concentrate their energies into the horizontal plane. Radio energy sent up or down is usually a waste. These antenna increase their gain by sending (or concentrating) this energy out horizontally rather than vertically. The tighter the concentration into the horizontal the higher the gain.

The antenna has a larger capture area than you would assume by the cross section alone. The *capture area* in square meters is given in the formula below compared to an isotropic radiator.

$$CaptureArea = gain \cdot \frac{\lambda^2}{4\pi}$$



Adding multiple antenna to one transceiver requires the use of special splitter units. The energies to and from the radio are split between the antenna. This means that adding such antenna will reduce the effective gain of each individual antenna. The *polarization* of an antenna is very important and in many countries is specified by the governing authority on the license issued. Most antenna may be installed horizontally or vertically.

Generally an antenna which has its elements vertical is *vertically polarized*. A good example are car radio antenna which are vertical. If the elements are horizontal the antenna is *horizontally polarized*. It is important that all antenna in a system be either horizontal or vertical. Attempting to communicate between a station with a horizontal antenna and one with a vertical antenna will result in a weak signal.

Generally all systems which require the central site to communicate in all directions use vertical polarization. Most governments prefer that fixed point systems use horizontal polarization in order to provide isolation from more common mobile (car) systems which are vertically polarized. Often government regulations may limit the power of the radio transmitter as well as the effective radiated power. The *effective radiated power* is the power sent out by the antenna in the direction of maximum gain. As the antenna concentrates power in one direction this has the same effect of increasing the transmitter power, i.e. effective power. As a result it may not be possible to utilize antenna over a certain gain as this could result in excessive effective radiated power. Selecting an antenna may be a complex task in attempting to balance the need to communicate to several stations in different directions without tall masts and within government power restrictions.

When selecting an antenna the following needs to be considered:

- Lightning protection
- Directionality required
- Gain required
- Corrosion (salty conditions)
- Governmental regulations
- Proximity to other radio services
- Antenna tuning requirements
- Safety

As a general guide the following needs to be considered when installing an antenna:

- Polarization (Vertical/Horizontal)
- Clearance of near obstructions
- Condensation drainage from antenna
- Lightning avoidance
- Possible bird damage to antenna cable
- Weatherproofing connections
- Cable bending radius

Many different types of whip antenna are available and these are discussed below:

[Whip \(Vertical\) Antenna](#)

Generally whip antenna appear as a small vertical rod. Whip antenna are commonly used in automotive applications and are generally not recommended for fixed point telemetry systems. They are used in applications that do not require high gain, where lightning risk is not high, and low cost is required. Whip antenna usually require mounting at the highest point of a mast and are therefore the most likely item to be struck by lightning. They are also not generally tolerant of metallic objects alongside. Whip antennas may only be used for vertically polarized systems. There are many types of whip antenna and each have specific mounting and tuning requirements. Generally these antenna require on-site tuning. Some must be mounted on a metallic surface to provide a "ground plane", others do not. Consult the manufacturer's data for further information.

To be continued next month

GSBARC 2004 VE Schedule

Jan 18 **NO VE** - HRU 2004, Oyster Bay, NY 3 PM
Feb 22 Babylon Town Hall EOC – 12 Noon
March 28 Babylon Town Hall EOC – 12 Noon
Apr 25 Babylon Town Hall EOC – 12 Noon
May 27 Babylon Town Hall EOC – 12 Noon
June **NO VE** - Field Day -6/26-6/27Babylon Town Hall
July 25 Babylon Town Hall EOC – 12 Noon
Aug 22 Babylon Town Hall EOC – 12 Noon
Sept 26 Babylon Town Hall EOC – 12 Noon
Oct 24 Babylon Town Hall EOC – 12 Noon
Nov 28 Babylon Town Hall EOC – 12 Noon
December **NO VE** - *Season's Greetings*

Committee Chairpersons

Club Apparel – Robert, N0UH
Club Station/Equip – Walter, KA2RGI
DX/Contesting – Tom, KA2D
Education – Walter, KA2RGI
Hamfest – Dom, WA2UJI
Library – Tom, KA2D
Membership – Gene, KB2TXZ
Newsletter – Tom, KA2D
Home Page – Tom, KA2D
DX Cluster – Tom, KA2D
Repeaters – Walter, KA2RGI
VE Sessions – Tom, KA2D

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, or contact Walter, KA2RGI, 631-957-0218, or via email at: ka2rgi@arrl.net.

'73 de Dave, N2UHR!

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