



ZERO BEAT

Southeastern Massachusetts
Amateur Radio Association, Inc.
54 Donald Street
South Dartmouth, MA 02748



Since 1932

Volume 48 Issue 1

SEMARA-W1AEC

January 2012

2012 Election Results

Election results for 2012 Officers, Board of Directors, and Trustee are now official.

SEMARA Election Day was Thursday, December 1, 2011.
Voting took place at the end of the 7:00 PM business meeting.

Your 2012 Officers:

President:

Marcel L. Dumont, W1MLD

Vice-President:

Joseph E. Krisnosky, Jr., N1IXC

Secretary:

Marc M. Dumont, KB1ODE

Treasurer:

Michael J. McDonald, KB1NB

Board of Directors:

Andrew J. Reuter, WA1FNM

Bradford E. Paiva, W1BEP

John Walsh, WA1LSH

Trustee (5 Year Term; 2016 Chairman):

Richard J. Halliwell, K1AHA



*GRAPHIC BY RICK, W1RJG

ZERO BEAT

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2011 SEMARA OFFICERS**President**

Marcel Dumont—W1MLD

Vice President

Joe Krisnowsky—N1IXC

Secretary

Marc Dumont—KB1ODE

Treasurer

Mike McDonald—KB1NB

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Directors:

Andy Reuter—WA1FNM

Brad Paiva—W1BEP

John Walsh—WA1LSH

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Trustees: (year term is up)

Henry Blanchett—W1GYL (2012) ch.

John Walsh—WA1LSH (2013)

Louis Mester—W1CH (2014)

Joe Krisnowsky—N1IXC (2015)

Dick Halliwell—K1AHA (2016)

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STANDING COMMITTEES**Building and Grounds**

Tony Lessa—KB1UAM pending

Marty Jordan—KA1YFV

Scholarship

Sonny Eddleston—K1USW – chair

Chuck Moszczanski—KB1FRL

Alan Dulong—WB1FQP

Joe Krisnowsky—N1IXC

Technical/Repeater/Website

Dave Goldstein—W1DJG: Technical

Rick Cabral—W1RJC: Repeater

Rick Cabral—W1RJC: Website

Ben Jackson—N1WBV: facebook

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SPECIAL COMMITTEES**Activities**

VACANT

ARES/SKYWARN/RACES

Rob Macedo—KD1CY

QSL Manager

John Nery—WA1ESO

Radio Events

Bob Kelley—K1KVV

Tech Talk

Brad Paiva—W1BEP

It seems to me ... de Bob - K1KVV, Editor

that we all can make a resolution to become active in the life of the club:
“Health and prosperity for SEMARA in 2012!”

For starters, let’s be sure to welcome our new members and all volunteer to be their “Elmers.” Be sure to greet them anytime they announce their callsigns on our repeater.

Radio Events:

Here are some special radio events for this month (others on page 8):

⇒ **All_modes** Jan 14, 0000Z - Jan 15, 2359Z 1.8-28

Hunting Lions In the Air lionshuntingintheair.lionwap.org

⇒ **Phone only** Jan 8, 1800Z - Jan 8, 2400Z 3.5-28

Kid’s Day www.arrrl.org/kids-day

⇒ **Digital only** Jan 7, 0000Z - Jan 7, 2400Z 3.5-28

070 PSKFest www.podxs070.com

⇒ **Phone_CW** Jan 21, 1900Z - Jan 23, 0400Z 50+

ARRL January VHF Sweepstakes www.arrrl.org/contests

Let me know if you work any rado events so I can report in the next issue!

Technical Articles:

- See my article *For the Good of the Club* on page 5.
- See Fred’s (N1TF) article on *Automatic Level Control* on page 6.
- See also my article *Decibels—a Review* on page 7.

POINT TO PONDER

Be always at war with your vices,
at peace with your neighbors,
and let each new year find you a better man.

~Benjamin Franklin

HAMMIN’ AROUND

Question* G5B08 What is the peak-to-peak voltage of a sine wave that has an RMS voltage of 120 volts?

- A. 84.8 volts
- B. 169.7 volts
- C. 240.0 volts
- D. 339.4 volts

* 2015 Element 3 General Class Question Pool (good thru 2015-06-30)

Answer on page 8.

Club Notes

January is the month when we make a fresh start at SEMARA. We elected new officers, a Board of Directors, and a new Trustee.

Did you make a resolution? Will you keep it?

See our website for the latest postings: <http://semara.org>.



Club Numbers
GPS Coordinates:
 Lat. N 41° 36.795' Long. W 070° 56.550'
Maidenhead Grid Coordinates: FN41mo
For FISTS Sprints: FISTS #10555

LOCAL NETS

Everyone is welcome to check in!

147.000+ (PL 67.0 Hz) (FM) — Massachusetts RACES Drill (Region 2, Sector A) is held on the first Monday of the month at 7:30 PM.

50.200 MHz (USB) — Net is held Wednesdays at 8:30 PM. Dick, K1AHA (Dartmouth) is net control.

28.490 MHz (USB) — Net is held Tuesdays at 8:30 PM. Dick, K1AHA (Dartmouth) is net control.

3868 kHz (LSB) — SEMARA Morning Net is held weekdays from 7:30-8 AM ET.

SEMARA has three new members! Three applications for membership were unanimously approved at the Dec. 1, 2011 Business meeting:

- Margaret Kannan (KB1WGT),**
- Rakesh Kannan (KB1WGS),**
- David M. Singer (KB1WIX)**

Welcome to the club!



Next VE Session - February 4.

Here's your chance to upgrade to General and Extra.

I have heard nothing about my query, "Should we start a sign-up sheet for those interested in upgrading? What's your availability? How's Thursday evening or Saturday morning/afternoon or another time work for you? How soon would you like to take the step towards getting more operating privileges?"



Tech Talks. This space reserved for announcements about the Tech Talk. **Brad, W1BEP,** is in charge. Ask him when we will have our next Tech Talk and what the topic will be.



LOCAL REPEATER DIRECTORIES

See <http://www.nerepeaters.com/se.htm>
144 (<http://www.nerepeaters.com/2m.htm>)
222 (<http://www.nerepeaters.com/222.htm>)
440 (<http://www.nerepeaters.com/440.htm>)
902 (<http://www.nerepeaters.com/902.htm>)

Sudoku

Here is a difficult Sudoku puzzle to solve while waiting for the net to start. (Solution on p. 8.)

1				4	5		
		9		2		1	
	7		9	5		4	
							6
		3		1		7	
2					8		
		8					
			7			9	
		7			3	5	1

NEXT SEMARA VE SESSION

February 4, 2012

Clubhouse @ 10:30 AM

Contact: Larry Houbre-AA1FS

<[exams\[at\]semara\[dot\]org](mailto:exams[at]semara[dot]org)>

508-991-6055



Official Meeting Minutes



December 1, 2011

The meeting was called to order at 7:03 p.m. by **President Marcel (W1MLD)** with salute to the flag. The roll was called with 21 members and 0 guests present.

A moment of silence was held for **George Souza (N1MWB)**.

SECRETARY'S REPORT

A motion was made, seconded and unanimously approved to dispense reading the minutes and accept as posted on the board and *Zero Beat*.

TREASURER'S REPORT

Treasurer **Mike (KB1NB)** stated there were several large expenses over the past month, including property tax, floor and door repairs. The current balance on hand is \$22,174.00. Outstanding income from Netcom is \$16,535.00 to date. There was some discussion from the floor regarding this amount and what can be done about it. A motion was made, seconded and unanimously approved to refer the report to audit.

STANDING COMMITTEES

Buildings and Grounds

Dave (K1JGV) stated that the pipes under the building have been wrapped as approved at the last meeting. An estimate from his electrician to complete the balance of work on the heating system, to include replacement of circuit breakers and installation of rheostats would cost \$255.00. He further stated that he would pay the electrician from the monthly stipend allocated to the Building and Grounds Committee.

President **Marcel (W1MLD)** and Treasurer **Mike (KB1NB)** stated that that is not how the stipends were intended to be used and further instructed that, according to the membership vote from November's meeting, the estimate was to go to the Finance Committee for further review and appropriate action to be taken at a later business meeting.

Technical

Ben (N1WBV) mentioned that the Technical Committee needs volunteers to assist. Current projects include inventory, log periodic antenna repair and installation of the wireless internet link to the repeater shack.

It was brought up that **Marcel (W1MLD)** and **Armand (W1BUG)** completed inventory of equipment within the building and would work on equipment in the out buildings.

There was discussion about the fact that someone over the internet keeps moving the webcam far right, left or

down. The camera control already requires a user name and password. Ben will look into disabling the movability of the camera, making it static instead.

Scholarship

Joe (N1IXC) stated that information on the scholarship has been distributed to the schools and the committee is waiting for returns.

SPECIAL COMMITTEES

ARES, RACES, SKYWARN

Eric (N1WCO) mentioned that there will be a RACES net this coming Monday. **Chris (W1EAV)** mentioned the ARES net on the Fairhaven site is at 8:30 p.m. and **Ben (N1WBV)** mentioned the SKYWARN appreciation net is this weekend.

Radio Events

Bob (K1KVV) mentioned the upcoming *Lighthouse Christmas Lights QSO Party* coming up as well as the CW-only New Year's Eve/Day *Straight Key Night* (SKN).

Repeater

Ben (N1WBV) spoke about the repeater. He advised that the committee was looking for help. There was some discussion regarding replacing the backup battery for the 2 meter repeater. It was agreed to get more information on the battery and look into getting a replacement.

Marcel (W1MLD) also advised that he had been in contact with **Tony (NN1D)** regarding a generator for backup power to the repeater shack. Tony has applied for a grant through the Police Department for a propane powered generator, tank, transfer switch and miscellaneous hardware, including installation. The grant would come from Homeland Security as there are public service systems in the shack. It could, potentially, run that equipment as well as the 2 meter repeater.

RATIFICATION OF NEW MEMBERS

There were three applications for membership presented during the meeting. A motion was made, seconded and unanimously voted to act on all three applications at the same time. The three applications were received from **Margaret Kannan (KB1WGT)**, **Rakesh Kannan (KB1WGS)** and **David M. Singer (KB1WIX)**. A motion was made, seconded and unanimously voted to accept all into membership. Welcome!

PRESIDENTS COMMENTS

The President, **Marcel (W1MLD)** commented that the

(Continued on page 5)

SEMARA News

(Minutes continued from page 4)

floor was complete. After installation the floor was professionally cleaned, sealed and waxed. The front door and frame had been replaced, with thanks to **Armand (W1BUG)** for coordinating all the work. **Marcel (W1MLD)** advised that inventory of equipment was well underway and that equipment insurance through ARRL was still a good idea.

OLD BUSINESS

There was discussion regarding the backup battery for the repeater and its replacement.

NEW BUSINESS

There was discussion about spare computers as well as old ones for disposal. **Marcel (W1MLD)** suggested the purchase of a small cabinet to store supplies. A motion was made, seconded and unanimously approved to purchase such a cabinet for a cost of less than \$100.00.

FOR THE GOOD OF THE CLUB

Topics discussed were: cleaning of the new floors, new licensees from the recent Technician class given by **Tony (NN1D)**; wish list for possible upgrade classes to General or Extra; and the possible options with Netcom and the large amount of arrears owed to SEMARA.

NOMINATIONS AND VOTING

Open nominations through the past month for 2012 Officers were formally closed with a motion being made, seconded and unanimously voted. Ballots were passed out. The votes were counted and the results are as follows:

President: Marcel Dumont (W1MLD)

Vice President: Joseph Krisnosky (N1IXC)

Secretary: Marc Dumont (KB1ODE)

Treasurer: Michael McDonald (KB1NB)

Directors: Andrew Reuter (WA1FNM),
Brad Paiva (W1BEP),
John Walsh (WA1LSH)

Trustee: Richard Halliwell (K1AHA)

ADJOURN

A motion was made, seconded and voted to adjourn at 8:26 p.m.

Respectfully Submitted,
Marc M. Dumont (KB1ODE), Secretary

The **50/50 raffle** was won by **Anthony Lessa (KB1UAM)** and the split was \$22.50/\$22.50.

GEORGE P SOUZA, N1MWB (SK)



George P. Souza, 82, of Somerset, died Sunday, November 27, 2011 Brockton following a lengthy illness. Born in New Bedford, he resided in the city for many years and in Somerset from 1996-2009.

He was employed as a maintenance man for the City of New Bedford Housing Authority until his retirement. He was a lifetime member of the New Bedford Rod & Gun Club where he enjoyed guns and shooting.

George became a member of SEMARA in 1965. He was an avid ham radio operator. He was a member during the growth period that saw our land purchase, the erection of a Quonset hut and, later, our current clubhouse.

Donations may be made in George's memory to Alzheimer's Association, 311 Arsenal St., Watertown, MA 02472.

Our thoughts go to his family. May he and his family

For the Good of the Club

If you have been reading the *Zero Beat* for the last year or so, you know that I have been unsuccessful in getting a response from the general membership on several issues. So, I'd like to give someone else the opportunity to try their hand at addressing some the ongoing club "topics of discussion."

CQS CQS CQS—Calling all SEMARA

- There is an opening (or two) for an Associate Editor (or two) for *Zero Beat*. If you have any interest, I'd be willing to provide whatever on-the-job-training you desire.
- We are always in need of good, high resolution pictures (at least 300 dpi) of people and activities. Anytime there is a gathering, or some changes made around the clubhouse or grounds, inquiring hams would like to see your pictures. Become an (un)official SEMARA photojournalist.

If you are so moved, or if you would like to nominate another member who might fill the bill, please contact me.

~Bob-K1KVV, Editor of Zero Beat
editor@semara.org

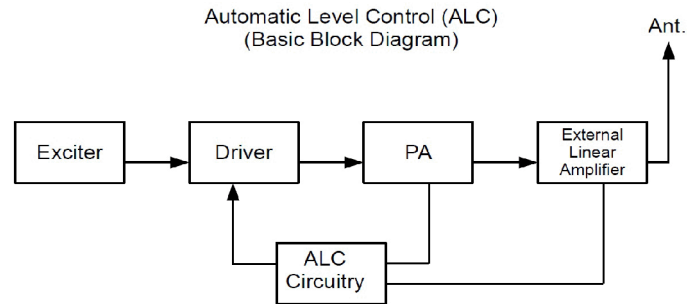
Amateur Radio News

ALC – Automatic Level Control

Class A, AB or B amplifiers are circuits that yield gain while maintaining the characteristics of the input waveform. The amplifier configuration, be it grounded grid/base, grounded cathode, etc. will determine the inversion or non-inversion of the signal; but suffice it to say, that the output of an amplifier of good design will leave all the characteristics of the input waveform intact. The design of the amplifier is determined by a set of parameters set down by the designer to meet the requirements of the application and will have a list of items such as size, plate/anode voltage, ventilation requirements, drive requirements, load, input and output impedance, and so on.

Let's look at only one of the design parameters; drive requirements. The amplifier needs a signal to process. The signal must be linear to start with and of a character such that the power level does not damage the amplifier input and does not induce distortion through a mismatch or excessive amplitude. All of these potential problems can be accommodated by the use of limiters, filters and/or attenuators.

There is a circuit in your transceiver that controls the final output. The *Automatic Level Control*, commonly



BASIC ALC BLOCK DIAGRAM BY N1TF

called ALC, circuit monitors the amplifier output to provide negative feedback to reduce the input signal in an attempt to maintain the linearity of the signal being transmitted. Within your transceiver, there are several monitoring points along the signal path that combine to create this feedback. Check the ALC level on the meter when transmitting and adjust the Mic Gain control to reduce the limiting. The meter gives an indication of the amount of feedback being generated and should not be full scale all the time.

When an external Linear Amplifier is attached, the ALC signal from it should be connected to the transceiver ALC connector so as to include the external amplifier's signal into the equation.

NOTE: Follow the setup procedures for the external amplifier to adjust the internal ALC circuitry before connecting it to the transceiver. Additional information can be found in "Section 17.8.3" of the 2011 ARRL Handbook.

Distortion of the transmitted wave causes poor audio quality, out-of-band emissions and interference to other services or, in the worst case, a salutation from the "OO" or the FCC.

73, de Fred-N1TF

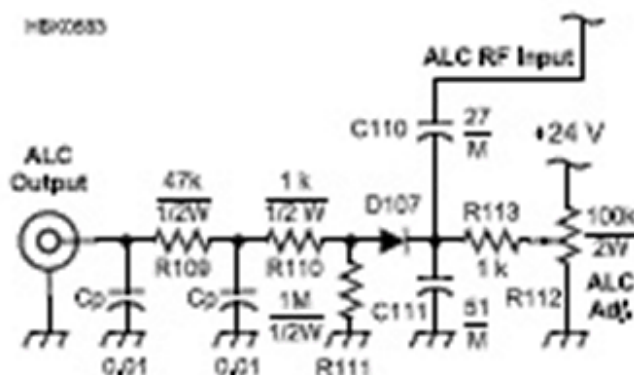


Fig 17.33 — An amplifier ALC circuit can be used to automatically limit the drive power from the transceiver to a safe level.

Amateur Radio News

W1AW 2012 Winter Op Schedule



Morning Schedule:

Time	Mode	Days
1400 UTC (9 AM EST)	CWs	Wed, Fri
1400 UTC (9 AM EST)	CWf	Tue, Thu

Daily Visitor Operating Hours:

1500 UTC to 1700 UTC - (10 AM to 12 PM EST)

1800 UTC to 2045 UTC - (1 PM to 3:45 PM EST)

(Station closed 1700 to 1800 UTC (12 PM to 1 PM EST))

Afternoon/Evening Schedule:

2100 UTC (4 PM EST)	CWf	Mon, Wed, Fri
2100 UTC (4 PM EST)	CWs	Tue, Thu
2200 UTC (5 PM EST)	CWb	Daily
2300 UTC (6 PM EST)	DIGITAL	Daily
0000 UTC (7 PM EST)	CWs	Mon, Wed, Fri
0000 UTC (7 PM EST)	CWf	Tue, Thu
0100 UTC (8 PM EST)	CWb	Daily
0200 UTC (9 PM EST)	DIGITAL	Daily
0245 UTC (9:45 PM EST)	VOICE	Daily
0300 UTC (10 PM EST)	CWf	Mon, Wed, Fri
0300 UTC (10 PM EST)	CWs	Tue, Thu
0400 UTC (11 PM EST)	CWb	Daily

Frequencies (MHz)

CW:	1.8025	3.5815	7.0475	14.0475	18.0975	21.0675	28.0675	147.555
DIGITAL:	3.5975	7.095	14.095	18.1025	21.095	28.095	147.555	
VOICE:	1.855	3.990	7.290	14.290	18.160	21.390	28.590	147.555

Notes:

CWs = Morse Code practice (slow)
= 5, 7.5, 10, 13 and 15 WPM

CWf = Morse Code practice (fast)
= 35, 30, 25, 20, 15, 13 and 10 WPM

CWb = Morse Code Bulletins = 18 WPM

CW frequencies include code practices, Qualifying Runs and CW bulletins.

DIGITAL = BAUDOT (45.45 baud), BPSK31 and MFSK16 in a revolving schedule.

Decibels—a Review

From the online wikipedia* reference:

*<http://en.wikipedia.org/wiki/Decibel>

The decibel (dB) is a *logarithmic unit* that indicates the ratio of a physical quantity (usually *power* or *intensity*) relative to a *specified* or *implied reference level*. (A *decibel* is one tenth of a *bel*, a seldom-used unit.)

Formulas for radio amateurs:

$$\text{Powerratio (dB)} = 10 \cdot \log_{10} \left[\frac{\text{Power}}{\text{power}} \right]$$

Power Ratios:

Recall, $\log_{10}(2) = 0.301... \approx 0.3$. So, doubling your output from 25W to 50W gives you a 3 dB power increase, Doubling again to 100W is another 3 dB or 6 dB total. (Adding logarithms is equivalent to multiplying the reference quantities.) Also, a ratio of 10 is the same as 10 dB.

Voltage Ratios:

$$\text{Voltage ratio (dB)} = 20 \cdot \log_{10} \left[\frac{\text{Volts}}{\text{volts}} \right]$$

An S-meter unit nominally corresponds to a 6 dB voltage ratio. But dB is defined as a power ratio. This can be applied to voltages.

$$\text{Power} = \frac{\text{Voltage}^2}{\text{Resistance}}, \quad P = \frac{V^2}{R}$$

The square gives a factor of 2. The resistances may be different at the antenna and the meter terminals, we like to ignore that!

~Bob, K1KVV

Code practice texts are from QST, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds.

Audio from W1AW's CW code practices and CW/digital bulletins is available using EchoLink via the W1AW Conference Server named "W1AWBDCT."

The 9:45 PM ET phone bulletin is currently unavailable via W1AWBDCT.

The audio is sent in real-time and runs concurrently with W1AW's regular transmission schedule. All users who connect to the conference server are muted. Please note that any questions or comments about this server should not be sent via the "Text" window in EchoLink. Please direct any questions or comments to w1aw@arrl.org.

The W1AW Operating Schedule may also be found on page 99 in the January 2012 issue of *QST* or on the web at,

<http://www.arrl.org/w1aw-operating-schedule> .

Some Radio Events

<http://www.arrl.org/contest-calendar>
 → **Contest Corral**

Phone/CW/Digital modes

Jan 14, 0000Z - Jan 15, 2359Z 1.8-28
Hunting Lions In the Air
lionshuntingintheair.lionwap.org

Phone/CW modes

Jan 8, 1000Z - Jan 8, 1400Z 3.5-28
Midwinter QSO Party trafficbureau.veron.nl

Jan 14, 1200Z - Jan 15, 1200Z 3.5-28
WW Peace Messenger Cities www.s59dcd.si

Jan 21, 1200Z - Jan 22, 1200Z 1.8-28
HA DX Contest www.ha-dx.com

Jan 21, 1900Z - Jan 23, 0400Z 50+
ARRL January VHF Sweepstakes
www.arrl.org/contests

Jan 22, 0900Z - Jan 22, 1500Z 3.5-28 144/432/1.2G
Int'l United Teenager Contest
www.qrz.ru/contest/detail/140.html

Phone only

Jan 8, 1800Z - Jan 8, 2400Z 3.5-28
Kid's Day www.arrl.org/kids-day

Jan 21, 0000Z - Jan 22, 2359Z 1.8-28
YLISSB QSO Party www.ylssystem.org

Digital only

Jan 7, 0000Z - Jan 7, 2400Z 3.5-28
070 PSKFest www.podxs070.com

Jan 21, 1200Z - Jan 22, 1200Z 3.5-28
UK DX RTTY Contest www.ukdx.srars.org

Jan 28, 1200Z - Jan 29, 1200Z 3.5-28
BARTG RTTY Sprint www.bartg.org.uk

Local VE Sessions

Walk-ins permitted unless otherwise noted.
<http://www.arrl.org/find-an-amateur-radio-license-exam-session>

SEMARA – 10:30 AM February 4th
 Larry Houbre-AA1FS 
 <exams[at]semara[dot]org>
 508-991-6055

Fall River, MA – 7:00 PM January 16th
 Skip Denault-KB1CNB
 <skip[at]newtestamentschool[dot]org>
 774-644-3469

Falmouth, MA – 9:00 AM January 14th
 W. Ben Fleck-K2LYE
 <BenFleck[at]verizon[dot]net>
 508-540-2583

Providence, RI – 7:00 PM January 12th
 Louis Mester-W1CH
 <W1CH[at]arrl[dot]net>
 401-263-6045

Coming FLEAS & FESTS

www.arrl.org/hamfests/search

None local in January 2012

Answer: HAMMIN' AROUND

What is the peak-to-peak voltage of a sine wave that has an RMS voltage of 120 volts? D. 339.4 volts. Recall $V_{peak} = \sqrt{2} \cdot V_{rms} = 1.412 \cdot 120 = 169.7$ & $V_{peak-to-peak} = 2 \cdot V_{peak}$.

Answer: Sudoku ₉₂

6	2	7	8	4	9	3	5	1
3	1	5	7	6	2	4	9	8
9	4	8	1	3	5	7	6	2
2	6	1	4	9	7	8	3	5
5	8	3	2	1	6	9	7	4
7	9	4	5	8	3	1	2	6
8	7	9	6	5	1	2	4	3
4	5	9	3	2	8	6	1	7
1	3	2	9	7	4	5	8	6

CLUB ACTIVITIES

BUSINESS MEETING

7 PM First THURSDAY of the month

SUNDAY RAGCHEW

7-10 AM

MOST-OF-THE-TIME LUNCH(call ahead)

Meet at the clubhouse at 11:00 AM FRIDAYS

Leave for LUNCH at 11:30 AM