



Hoodview News

Points of Interest:

- Hoodview Amateur Radio Club can be found on the web at www.wb7qiw.org
- HARC is a Special Service Club
- Email Cory with any information for the newsletter at jcschoch@frontier.net
- Feel free to join our affiliated activities: Hoodview Amateur Radio Travelers (HART) and Classy Radio Red Hatters

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General Club Meeting
on September 18th, 7:30 PM
At Mt. Hood Community College, Rm 1001
Hope to see you all there.

From The President — Shaun Harteloo, N7TNP



September is off to a beautiful start! The weather has been summer like and I have been taking advantage of it preparing for winter. With that said, it is that time of year again, time to check your emergency kit. Power up that generator, check your food expiration, and make sure it is all in order for an emergency. Another way you can keep your food stores from going bad, is to rotate them out. So buy canned food for your emergencies, but rotate them out as you use them. Keep the older stock in front, use those cans for your meals as you would normally, and replace them on your next trip to the store. Put the new cans behind the older ones.

September's meeting will be about Alternative Power. This will be good information about what you can do for emergency power, or running your shack off of the grid. In October we'll have the Multnomah County Search and Rescue team.

We have Technician classes running right now, and we also have a class scheduled for November. If you know anyone interested in getting their ticket, this is a great way to get them started. The board has done some work recently revamping the class structure, and we are excited to teach some new hams. I have a couple co-workers that I have recently talked into the hobby. One is interested in 4-wheeling on Mt. Hood, and was going to use CB. I told him he should look into Amateur Radio instead. We are also going to be working on the wb7qiw.org site this winter, and hope to have a new modern looking web page up and running soon.

Good news! I am back on the low bands. I still need to figure something out for 40m and lower. With the help of KA7WOF and W7GEO, I am on the air again. Thank you for your help George and Dave. The R5 is on a mast in the back yard, hooked up to the radio. I have worked Papua New Guinea, New Zealand, and Australia on JT-65.

This month, the YL and I are taking an Extra Class put on by Clark County, and you may hear me and Laura /AE coming soon.

73 my friends, and see you soon de Shaun N7TNP!



Hoodview Amateur Radio Club WB7QIW

PO Box 951 1 Gresham OR 97030

A non-profit organization organized exclusively for one or more of the purposes as specified in Section 501 (c) (3) of the Internal Revenue Code, Vol. 17, No. 6.

Board of Directors:

- President — Shaun Harteloo, N7TNP
- Vice President — Richard Berney, KE7AOA
- Secretary — Cory Schoch, KA7IUG
- Treasurer — George Dover, W7GEO
- Board — Mike Magnuson, N7ETA;
- Scott Burrows KF7ZQO; Dave Gettman KA7WOF;
- Chris Jensen, KG7ADQ, Pam Woods KC7Q

Test Your Knowledge

1. When, under normal circumstances, may a Technician Class licensee be the control operator of a station operating in an exclusive Extra Class operator segment of the amateur bands? T1E12 (A) [97.119(e)]
 - A. At no time
 - B. When operating a special event station
 - C. As part of a multi-operator contest team
 - D. When using a club station whose trustee is an Extra Class operator licensee

2. What should be done to insure that voice message traffic containing proper names and unusual words are copied correctly by the receiving station? T2C03 (C)
 - A. The entire message should be repeated at least four times
 - B. Such messages must be limited to no more than 10 words
 - C. Such words and terms should be spelled out using a standard phonetic alphabet
 - D. All of these choices are correct

3. What popular operating activity involves contacting as many stations as possible during a specified period of time? T8C03 (A)
 - A. Contesting
 - B. Net operations
 - C. Public service events
 - D. Simulated emergency exercises

4. What information is traditionally contained in a station log? G2D09 (D)
 - A. Date and time of contact
 - B. Band and/or frequency of the contact
 - C. Call sign of station contacted and the signal report given
 - D. All of these choices are correct

5. What effect can be caused by a resonant ground connection? G4C06 (C)
 - A. Overheating of ground straps
 - B. Corrosion of the ground rod
 - C. High RF voltages on the enclosures of station equipment
 - D. A ground loop

6. How does increasing boom length and adding directors affect a Yagi antenna? G9C05 (A)
 - A. Gain increases
 - B. Beamwidth increases
 - C. Weight decreases
 - D. Wind load decreases

7. Which of the following is true about contest operating? E2C01 (A)
 - A. Operators are permitted to make contacts even if they do not submit a log
 - B. Interference to other amateurs is unavoidable and therefore acceptable
 - C. It is mandatory to transmit the call sign of the station being worked as part of every transmission to that station
 - D. Every contest requires a signal report in the exchange

8. Which of the following forms the output of a class D amplifier circuit? E7B03 (A)
 - A. A low-pass filter to remove switching signal components
 - B. A high-pass filter to compensate for low gain at low frequencies
 - C. A matched load resistor to prevent damage by switching transients
 - D. A temperature-compensated load resistor to improve linearity

9. When constructing a Beverage antenna, which of the following factors should be included in the design to achieve good performance at the desired frequency? E9C12 (D)
 - A. Its overall length must not exceed 1/4 wavelength
 - B. It must be mounted more than 1 wavelength above ground
 - C. It should be configured as a four-sided loop

Hoodview Happenings

Club Calendar

Sep 18—Gen Mtg: 7:30pm @ MHCC, RM 1001
 Sep 20—VE Testing: 9:00am @ MHCC, HF1
 Oct 2—Brd Mtg: 7:30pm @ George's W 7GEO
 Oct 16—Gen Mtg: 7:30pm @ MHCC, RM 1001
 Nov 6—Brd Mtg: 7:30pm @ Mike's N7ETA
 Nov 15—VE Testing: 9:00am @ MHCC, HF1
 Nov 20—Gen Mtg: 7:30pm @ MHCC, RM 1001
 Dec 4—Brd Mtg: 7:30pm @ Shaun's N7TNP
 Dec 18—Gen Mtg: 7:30pm @ MHCC, RM 1001

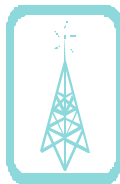
Happy Birthday to our Members

09/20	KE7AGG	Lupe Aispuro
09/23	KG7AZQ	Chris Jensen
09/24	W7SMB	Sylvia Barmore
10/02	N7LF	Jel Harrington
10/03	KC7QAC	Judy Chatelain
10/04	KE7KAK	William Wood
10/28	KX7N	Mike Lane
11/09	K7OC	Ed Corey
11/16	N7QR	Russ Mickiewicz
11/22	KF7SKB	Shaun Harteloo
11/22	KD7HHN	Dean Wright
11/24	W7UFJ	Denny Doolittle
11/28	KF7HOT	Tom Beinbauer
11/29	N7ETA	Mike Magnuson
12/05	K7DEBDebra	Provo
12/15	No Call	Dawne Kite
12/18	K7DSZ	Neal Penland



Club Radio Nets

CW Net on 28.130 MHz at 7:00 pm, Sunday through Saturday, Net Control is Beaver & Russ. 2 M net on 147.28+ MHz, at 7:30 pm, each Wednesday evening. Net Control operators needed for the Wednesday night net. See George W7GEO to volunteer.



FCC Question Pool Answers:

1. A 2. C 3. A 4. C 5. B 6. A 7. A 8. A 9. D

Sunshine Committee

The club extends condolences to Gary Douglas AC7GF for his wife Jeanie's death.

If you know of anyone that could use our thoughts and prayers, contact Laura K7LQT.



September Program Scheduled

Alternative Power

Refreshments:

September: Ed Corey and Dawne Kite

October: Neal and Linda Penland

November:

December: Board Members



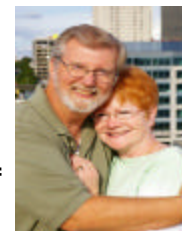
Breakfast Gathering

Join us for breakfast every

Saturday morning at Heidi's in Gresham. Conversation and coffee starts around 7:00 am with the breakfast orders taken at 7:30.

Silent Keys

Joe Michaud W A7OEM/ N7HA died last month after a 11-year battle against Alzheimers. He was one of the earliest members of the club and served as President in 2000. He loved volunteering for March of Dimes and the Rose Festival Parade. Joe was always enjoyed operating CW at Field Day or camping with HoodviewARTravelers. He leaves behind his wife Pat W7RED, daughters Cortney and Morgan, grandchildren Gage, JW, Ely, and Brody and brothers, Ross and Tony.



Vern Smith KA7DCQ passed away after battling cancer and heart issues. He is survived by his wife Diane. Vern was one of the first people to work on the repeater. He was also an instructor for the club.



He was well known in the club as the owner of "The White Van" which held almost every kind of electronic part in its many cubby holes. He was always working on a project or maybe three or four projects. Sometimes they got finished, sometimes they didn't, because he was always fine tuning them. He was a current member of the Vancouver ARES.

While neither of them were current members, they will be missed and remembered by many.

Mike's Tech Corner

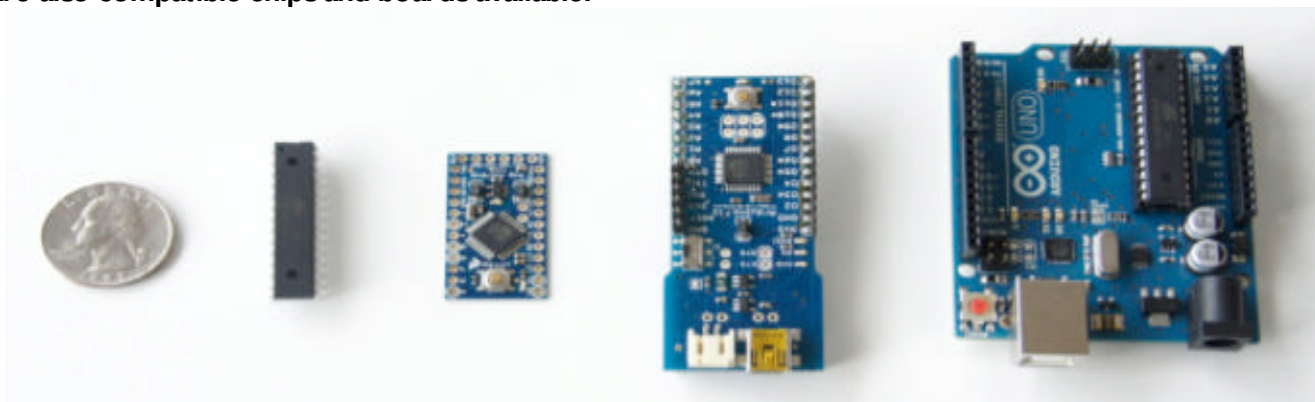
Arduino vs Raspberry Pi and Beagle Bone Easy Modules for Ham Projects

This month I am going to look at a subsystem that can be used for many ham projects and compare it to other subsystems used for projects. This is a little more advanced as it contains advanced chips and circuitry. Although more advanced, it is really simple to setup run as a complete functioning project with just a few simple parts or modules. The Arduino is also inexpensive and so are the many other modules that you use for many projects.

For the beginner, the Arduino has the largest community of users, the most tutorials and sample projects and is simplest to interface to external hardware. The boards are designed to easily interface with a wide variety of sensors and effectors without external circuitry, so you don't need to know much about electronics at all to get started. If you haven't played with these before, get one (they're inexpensive) and try it. It can be a really great experience.

For projects that need to be small in size the Arduino works great. Although the Raspberry Pi and Beaglebone are similar in size as the Arduino Uno, the Arduino also comes in several smaller sizes as seen below. Basically, what makes an Arduino an Arduino is a particular microprocessor and a little bit of software. It uses a very small, inexpensive, embedded system on a chip microprocessor from a company named Atmel. For advanced projects that need to be really small, you can buy these chips for a dollar or two and put the Arduino bootloader (a program that makes the Arduino give the Arduino its basic functions) on the chip and viola, you have an Arduino. This has been done with many projects and it can make for a very tiny little gadget when you don't even have a circuit board. There are also compatible chips and boards available.

Name	Arduino Uno	Raspberry Pi	BeagleBone
Model Tested	R3	Model B	Rev A5
Price	\$29.95	\$35	\$89
Size	2.95"x2.10"	3.37"x2.125"	3.4"x2.1"
Processor	ATMega 328	ARM11	ARM Cortex-A8
Clock Speed	16MHz	700MHz	700MHz
RAM	2KB	256MB	256MB
Flash	32KB	(SD Card)	4GB(microSD)
EEPROM	1KB		
Input Voltage	7-12v	5v	5v
Min Power	42mA (.3W)	700mA (3.5W)	170mA (.85W)
Digital GPIO	14	8	66
Analog Input	6 10-bit	N/A	7 12-bit
PWM	6		8
TWI/I2C	2	1	2
SPI	1	1	1
UART	1	1	5
Dev IDE	Arduino Tool	IDLE, Scratch, Squeak/Linux	Python, Scratch, Squeak, Cloud9/Linux
Ethernet	N/A	10/100	10/100
USB Master	N/A	2 USB 2.0	1 USB 2.0
Video Out	N/A	HDMI, Composite	N/A
Audio Output	N/A	HDMI, Analog	Analog



A variety of different Arduino sizes and form factors

If you need to an application that connects to the internet then the BeagleBone or Raspberry Pi is best to use. Both these devices are real linux computers. *They both include* Ethernet interfaces and USB, so you can connect them to the network relatively painlessly. Via USB, you can connect them to wireless modules that let then connect to the internet without wires. Also, the Linux operating system has many components built-in that provide rather advanced networking capabilities.

Applications that interface to external sensors. The Arduino makes it the easiest of any of the boards to interface to external sensors. There are different versions of the board that operate at different voltages (3.3v vs 5v) to make it easier to connect to external devices. The Arduino has analog to digital interfaces that let you easily connect components that output varying voltages.

For battery powered applications. The Arduino uses the least power of the bunch, although, in terms of computer power per watt, the BeagleBone is the clear winner. However, the Arduino has an edge here since it can work with a wide range of input voltages. This allows it to run from a variety of different types of batteries and keep working as the battery loses juice.

For applications that use a graphical user interface, the Raspberry Pi is the Better choice. This is not to say that the Arduino cannot provide graphics, but it take more program memory so not much is left for the external function.

Summary

The Arduino is a flexible platform with great ability to interface to most anything. It is a great platform to learn first and perfect for many smaller projects. It is also inexpensive;

Atmel ATmega328P-PU Microprocessor with Boot Loader \$6.00 (http://www.surplusgizmos.com/ICs-Chips_c_66-4-3.html). This is Arduino compatible.

Arduino Compatible D O R K B O A R D Kit \$6.25 (http://www.surplusgizmos.com/Dorkboard-Kit-Arduino-Compatible_p_1790.html)

Nano 3.0 controller compatible with Arduino nano \$10.00 Regular (squareup.com/market/just-for-fun-6)

Arduino Uno R3 (Atmega328 - assembled) \$24.95 (<http://www.adafruit.com/product/50>)

The Raspberry Pi is good for projects that require a display or network connectivity. It has incredible price/performance capabilities.

Raspberry Pi Model B+ 512MB RAM \$39.95 (<http://www.adafruit.com/products/1914>)

The BeagleBone is a great combination of some of the interfacing flexibility of the Arduino with the fast processor and full Linux environment of the Raspberry Pi (more so in fact)

BeagleBone Black Rev C - 4GB Flash - Pre-installed Debian \$55.00
(<http://www.adafruit.com/category/75>)

Next month I will present a simple project using the Arduino system.

73's—N7ETA

Missing Reports This Month

No Secretary Report because of the Annual Picnic. No meeting was conducted, only fun, socializing and eating some hamburgers. Yummy!

No Treasurer's Report because George was out of town and it wasn't available at the Board Meeting to review.

Welcome To Our New Member:

Tim Milne— W7WHN (T)
38008 SE Marcella Court
Sandy, OR 97055
503-668-5010 503-545-8820
timmilne@msn.com
BD: July 26

Editor's Note: Many of you have not seen or read the Constitution for many years. So over the next four months I will be running it in the newsletter for your enjoyment and education as to organization of our club. I hope you enjoy it.

HOODVIEW AMATEUR RADIO CLUB – WB7QIW CONSTITUTION

Originally Adopted May 27, 1976
Revised and Adopted November 21, 1991
Revised and Adopted June 18, 1998
Amended and Adopted April 15, 2004

ARTICLE ONE: NAME

The name of this organization shall be the HOODVIEW AMATEUR RADIO CLUB

ARTICLE TWO: PURPOSE

The Hoodview Amateur Radio Club is organized exclusively for the following purposes:

SECTION A. Scholarships and Training

1. To provide scholarships at Mt. Hood Community College, Gresham, Oregon.
2. To provide radio theory training to the public in all phases of amateur radio.
3. To provide training and instruction to members for improvement of skills relating to amateur radio.

SECTION B. Japanese Sister City Cultural Exchange

1. To sponsor and promote the exchange of culture, develop friendly relations and understanding and to work closely with the Sapporo Amateur Radio Club of Japan to further the cause of amateur radio.

SECTION C. Volunteer Examiner Coordinator Program

1. To provide Federal Communication Commission testing for amateur radio licenses through the Volunteer Examiner Coordinator (VEC) program.
2. To provide a pool of accredited Volunteer Examiners for the VEC Program.

SECTION D. Emergency Communications

1. To provide communication in times of disaster or other emergencies at the city and county level through the Amateur Radio Emergency Service (ARES) organization.

SECTION E. Public Service

1. To provide communications for charitable, public or other community activities.

SECTION F. Hobby

1. To provide a meeting place to socialize and to promote the exchange of ideas to further enhance the hobby of amateur radio.

Hoodview Amateur Radio Club
PO Box 951
Gresham OR 97030

We're on the web at
www.wb7qiw.org

HOODVIEW AMATEUR RADIO CLUB MEMBERSHIP FORM

Name: _____ Call Sign/License Class: _____
Spouse Name: _____ Call Sign/License Class: _____
Address: _____ Birth Date: _____
City: _____ Spouse Birth Date: _____
State: _____ Zip: _____ Work Phone: _____ Home Phone: _____
Email: _____ Cell Phone: _____

Change of name, address or other information

Regular Adult Membership (NEW) (RENEW) \$25.00/yr _____

Under 18 or over 65 Membership (NEW) (RENEW) \$20.00/yr _____

Additional Family Member (NEW) (RENEW) \$12.50/yr _____

Patron Donation _____

Repeater Donation _____

Scholarship Donation _____

TOTAL _____