



The Repeater

Next Club Meeting

Thursday,
February 5, 2015, 7:00 PM

Red Cross Building,
60 Hawthorne St., Medford, OR
Across from Hawthorne Park

Program: Basic: How to Program
your HT
Advanced: Radio Astronomy

Volume 2015, Issue 2

February 2015

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President & Webmaster
Vice President
Treasurer
Secretary
Newsletter & Membership

President's Letter

Field Day is coming soon to a field near you!

The club needs to decide soon as to its Field Day 2015 plans. At the January meeting two tentative options for the club's involvement were presented with the idea of having a final discussion and decision at the next meeting. So, please consider these two options in conjunction with your personal plans and join the decision process on February 5, our next club meeting.

- Option 1: A 2A entry to take place at Bear Creek Park near Biddle Road and the airport. This is the same place and entry level as last year. This would in-

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The Repeater is the official newsletter of the Rogue Valley Amateur Radio Club, Inc. It is published 10 times a year—once per month excluding July and August.

Secretary's Report

RVARC - Minutes for January 8, 2015

The meeting was called to order by Allan Taylor, K7GT at 1900 PDT in the meeting room of the Red Cross building - Medford, OR. Members and guests introduced themselves, and answered the question "What is your favorite band and mode?". Guests and new members included: Jim Roberts, K5CMZ, and his wife Barbara. Also new member Raoul Salem, KG6DKA.

A short presentation was given by Allan, K7GT on Basic VHF Repeater Fundamentals.

OLD business

No Old Business was discussed.

NEW business

Allan, K7GT announced a few changes in the format of the meetings, beginning with a short, 10 minute presentation, and a little

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President's Report, Cont'd.

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clude a GOTA station and the two operating positions that would be devoted to phone and CW, respectively.

- Option 2: A 3A entry as above. This would mean three independent operating positions with the third a 'swing' station alternating between phone, CW, and digital. With three positions, more care needs to be taken to avoid interference between them.

The 3A entry class of option 2 would be advantageous if we have many desiring to operate. If operators are not forthcoming there is less reason to add the third station.

A related issue is location. A possible site has been located near Dodge Bridge. It is a smaller site but there are some advantages. Carl located this site and has done some preliminary research on its viability for our use. I intend to visit it before the February meeting and each member is encouraged to contact Carl and perhaps visit it as well. A primary disadvantage may be that it is farther from the population centers in the valley. As there is a possibility that the Bear Creek Park location may 'go away' and turn into a football field, having an alternate location is important.

Please consider your interests, schedules, and come in February to join in the decision process.

February Presentations

The two presentations planned for February are:

- The short presentation will be a live demo on actually programming (setting up) HTs for use with repeaters. This is aimed at newly licensed hams or those who rarely use HTs and need some coaching. Please bring your HT down

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Secretary's Report, Cont'd.

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less time devoted to the business portion of the meeting. Allan also strongly suggested that no voting should take place on New Business, unless it cannot be avoided. This would allow for better consideration of issues before being voted upon.

Allan spoke briefly about Field Day, and the possibility of a different location for this year's operation. Carl VanOrden, W7BRO gave a report on the field located next to the District 3 Firehouse at Hwy 234 and Rogue River Drive, near the Dodge Bridge. Permission for use of the field has already been secured through District 3 should the club opt to utilize it.

Vice-President Jeff Statchwick, W7KNX, announce his desire to allow Don Bennett, KG7BP to assume the position of Vice-President, in accordance with the recommendations of the Nominating Committee, which were not properly presented in November. After some discussion relating to procedure, Jeff resigned his position of Vice-President. Mike Bach, WB6FFC, nominated Don Bennett to be Vice-President. The vote was taken, and Don was installed as the new Vice-President for 2015.

Carl VanOrden, W7BRO, pointed out a couple typographical errors in the club's Constitution, and offered to make the appropriate corrections. Scott Cummings, NA7OM suggested that since the Constitution has not been updated for 15 years, that it might be worth considering if revisions are appropriate.

Carl also announced that the club call sign had a respectable showing in the ARRL Centennial Points Challenge. W7DTA ranked 72 of 311 stations in Oregon, and qualified for the Second Level Certificate. The certificate costs \$16 if the club is inter-

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President's Report, Continued

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and join in.

- The second presentation will be on Radio Astronomy and will be given by Dennis Recla, WA5KTC. Both look to be enjoyable, entertaining, and informative.

Public Information Officer Request

The ARRL Oregon section Public Information officer (PIO), W7PAT, has requested that RVARC appoint a PIO and have that person take an online course to do the job. Todd K7TFC has volunteered to assume this role until he moves to Portland in July. So, the club will need to fill the position from its membership. If you feel you would like to perform this role for the club, please step up!

New Vice President

Jeff Statchwick W7KNX resigned as VP and an election was held for his replacement at the January meeting. The new VP is Don Bennett KG7BP. Welcome, Don. Thanks, Jeff, for your help in kicking off the new year program planning.

In line with the above, please consider volunteering for a club office next fall. If you care about the club going forward, there need to be those doing the planning and implementing that makes it go. Please step up! I did. Now it is your turn!

NAQP/phone

Yours truly actually got on phone this past Saturday (Jan. 17) and made some contacts in NAQP. A few observations:

1. You can definitely 'feel' the loss of several dB in communication effectiveness as compared to CW.
2. Getting the call and exchange correct using phonetics (or not!) is a different skill than the same from Morse.
3. As contests go, this one is fairly friendly. 120 more ops have the chance to get that rare SSB QSL from K7GT!

Regards, Allan K7GT

Secretary's Report, Cont'd.

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ested in obtaining it. Consideration was tabled until next meeting.

The issue of making coffee at the meetings was once again brought up for discussion, and a possible volunteer. Scott Cummings, NA7OM, considered it would be appropriate to nominate Jeff Statchwick, W7KNX, for the duties, as a reward for yielding his position as Vice-President. Still in a state of shock from the unexpected nomination, Jeff agreed to assume the duties for 2015.

Treasurer's report

Bob Deuel, K2GLO, reported a balance of \$3046.00 in the club treasury. All major bills have been paid, including rental and insurance.

The meeting was put on hold at 1940 PDT for "eyeball QSOs" and coffee. The meeting was called back into session at 2000 PDT

Presentation

A presentation on the APRS system was given by Scott Cummings, NA7OM. The system uses amateur radio to transmit position reports, weather reports, and messages between users.

The meeting was adjourned at 2045 local time.

Carl VanOrden, W7BRO, Secretary

Some Local Repeaters
From the website: www.repeaterbook.com

Medford amateur radio repeaters

10 repeaters found at or near Medford.

● = On-Air
 ● = Off-Air
 ● = Testing
 ○ = Unknown

Click on the frequency for additional details.
Click on a header to sort.

Frequency	Tone	Location	County	Call	Use	
146.6100-		Medford	Jackson	KG7FOJ	OPEN	○
147.0000+	123.0	Medford, Rogue Valley Manor	Jackson	K7RVM	OPEN	●
147.0200+	100.0	Medford, Jones Peak	Jackson	K7RPT	OPEN	●
147.0600+	CSQ	Medford	Jackson	K7FH	OPEN	●
440.4500+	100.0	Medford, Rogue Valley Manor	Jackson	KU6Y	OPEN	○
440.7250+	114.8	Medford, Manor	Jackson	K7TVL	OPEN	●
443.7750+		Medford, Baldy	Jackson	KE7MVI	OPEN	○
444.4500+	100.0	Medford, Rogue Valley Manor	Jackson	K7RVM	OPEN	●
444.6500+		Medford	Jackson	KG7FOJ	OPEN	○
1293.1250+		Medford	Jackson	KG7FOJ	OPEN	○

Ashland amateur radio repeaters

6 repeaters found at or near Ashland.

● = On-Air
 ● = Off-Air
 ● = Testing
 ○ = Unknown

Click on the frequency for additional details.
Click on a header to sort.

Frequency	Tone	Location	County	Call	Use	
146.6200-	100.0	Ashland	Jackson	W9PCI	OPEN	●
146.7000-	146.2	Ashland, Table Mountain	Jackson	NS7R	OPEN	●
147.1600+	136.5	Ashland, Soda Mountain	Jackson	WA6RHK	OPEN	○
147.2600+	123.0	Ashland, Mount Ashland	Jackson	WX7MFR	OPEN	●
440.7000+	162.2	Ashland	Jackson	WX7MFR	OPEN	●
442.3000+	162.2	Ashland, Mount Ashland	Jackson	K7TVL	OPEN	○

Central Point amateur radio repeaters

6 repeaters found at or near Central Point.

● = On-Air
 ● = Off-Air
 ● = Testing
 ○ = Unknown

Click on the frequency for additional details.
Click on a header to sort.

Frequency	Tone	Location	County	Call	Use	
145.3300-	100.0	Central Point	Jackson	W9PCI	OPEN	●
147.1000+	136.5	Central Point, Johns Peak	Jackson	KB7SKB	OPEN	●
147.3800+	131.8	Central Point	Jackson	KL7VK	OPEN	●
440.8250+	136.5	Central Point	Jackson	WA6RHK	OPEN	○
443.1500+	136.5	Central Point	Jackson	KL7VK	OPEN	○
444.1000+	100.0	Central Point	Jackson	W9PCI	OPEN	○

A Low-noise Gain-adjustable Microphone Preamplifier

Tom McDermott, N5EG

I recently built a homebrew SDR radio. To connect a microphone to it I had a choice of connecting directly to the radio (which has a audio ADC/DAC) or to my computer (the radio software can also use the soundcard on the computer).

When my Yaesu desk microphone was tried, the audio output level was too low for good results either when connected to the SDR radio or to the computer. The computer soundcard had a +20 dB MIC boost function, but when it was turned on, the background hiss was very objectionable. Additionally, the MIC was never shut off by this particular computer soundcard, so the hiss was heard in the computer speakers all the time no matter what the settings.

A Low-noise microphone pre-amplifier was designed and built. The gain can be set to +20, +30, +40, or +50 dB. It also has RFI filtering on the input and output to prevent upsetting the preamp in the presence of large RF fields. The amplifier uses a TL071 JFET op amp. This particular op amp is very common, inexpensive, has 3 MHz gain-bandwidth, and much lower noise than a 741 op amp. At a gain of +50 dB (a gain of 300,000) the amplifier is -3db down at about 10 kHz.

The schematic and a photograph are shown. An existing aluminum box with some previous holes was salvaged. A 9V battery powers the pre amplifier. This was a one-evening assembly using a scrap of perf board. The results have been quite good, and the +40 dB setting seems to work well with both direct input to the radio, and input to the computer soundcard.

It was necessary to add a foam windscreen to the microphone, otherwise talking too close to the mic (closer than 1 inch) would overload the pre-amp. With the windscreen the preamp does not overload at any distance.

The windscreen seems to also make the output level of the microphone more constant with changes in speaking distance from the microphone over the range of about 0 to 3 inches.

There is also a wire from the PTT switch on the microphone to the ring terminal of the 3-conductor 1/8 inch miniature connector, it just connects to the same terminal on the preamp output. While this is not used by the computer, it is connected to the PTT function on the SDR radio. This allows the microphone PTT switch to key and unkey the SDR radio just like a normal rig.

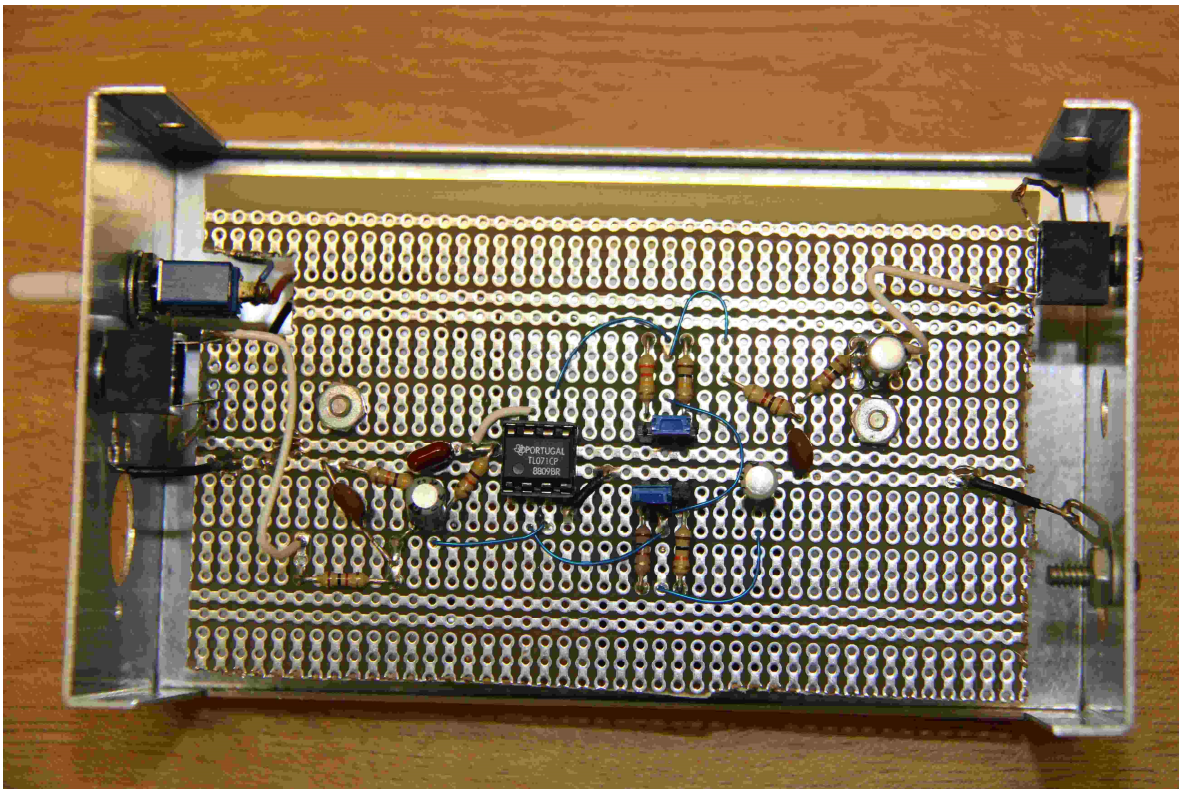
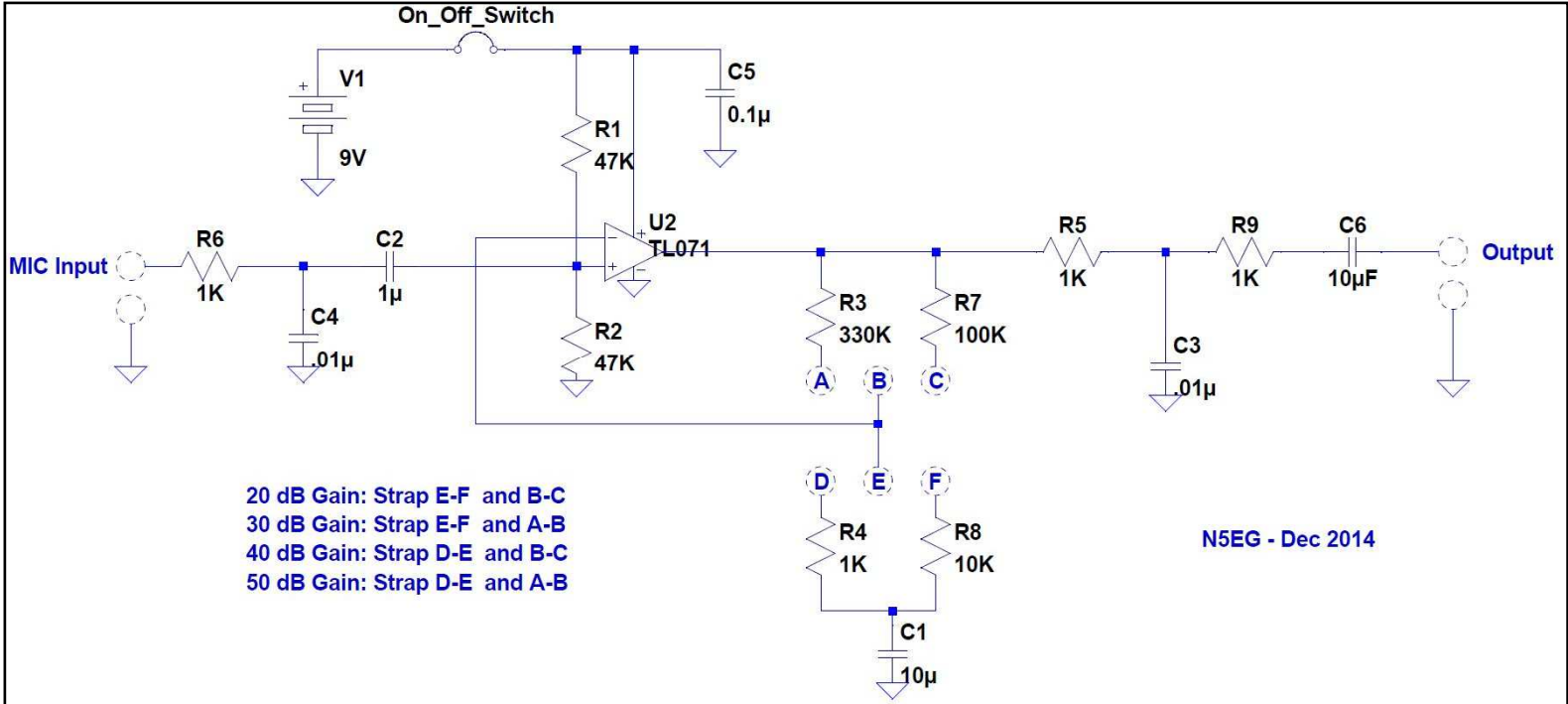
There are two straps used to select the gain, and the table on the schematic shows how to set each one to select the gain. They are small blue rectangles in the photo.

It is not recommended to substitute a 741 op amp for the TL071 shown. The gain-bandwidth of the 741 is only about 1 MHz, resulting in -3dB down at only 3 kHz in the higher gain setting. The 741 also has much higher input noise resulting in an increase in the background hiss at the highest gain settings.

The audio quality of the microphone when used with the computer soundcard is vastly improved. Avoiding the MIC boost on the soundcard removes the problem of annoying hiss even when the Mic is not selected (I personally consider this to be a rather severe deficiency in the soundcard).

R6/C4 and R9/C3 both form 15.9 KHz low pass filters to remove RFI. R5 is used to ensure amplifier stability.

A Low-noise Gain-adjustable Microphone Preamplifier Tom McDermott, N5EG. Continued



**Technician/General and Other Upcoming
Classes in Medford**

All classes take place in Room 106 of the Smullin Center, 2825 E Barnett Rd., Medford, Or 97504.

Sunday Jan 18th, 2015 - 3PM to 5PM - Meet & Greet for New Tech/Gen Class.

Come learn what to expect in our Technician/General Class Sessions.

Sunday Jan 25th, 2015 - 2PM - Connector Class.

Sunday Feb 8th, 2015 - 3PM - Technician/General Class begins.

For further information:

Contact Joe, AF7GN
Email ham.instruction@mail.com
Phone 541-941-7186

February 2015

Sun Mon Tue Wed Thu Fri Sat

1	2 • Oregon Railfan Net.	3	4	5 • RVARC Club Meeting • Women Hams Net • ARES Net.	6	7
8	9 • Oregon Railfan Net.	10	11	12 • Women Hams Net • ARES Net.	13	14
15	16 • Oregon Railfan Net.	17	18	19 • RVARC Newsletter Input Deadline • Women Hams Net • ARES Net.	20	21
22	23 • Oregon Railfan Net.	24	25	26 • Women Hams Net • ARES Net.	27	28

Events

- Thursday February 5th - 7:00 PM RVARC Meeting. Red Cross Building Medford.
- Thursdays 7:00 PM—Women Hams Net K7RVM Repeater 147.000 (+) [PL 123.0]
- Thursdays 7:30 PM - ARES Net. K7RVM repeater 147.000 (+) [PL 123.0]
- Mondays at 8:00 PM. Oregon Railfan Net. K7FH King Mountain Repeater 146.940 (-) [PL 136.5]. Also available on Echolink: Node #50239 or K7TVL-L
- Next Newsletter: March Issue. Deadline for input: February 19th

RVARC Membership

RVARC membership dues run from January 1 through December 31. Please bring cash or a check payable to RVARC to a club meeting, or mail (checks only) to:

RVARC Membership
c/o 1058 Linda Ave.
Ashland OR 97520

Regular Member:	\$20.00
Senior Member (62 and over):	\$15.00
Family Member:	\$20.00
Student Member:	\$10.00

For Sale / Wanted

2015 Amateur Radio Examinations

In the Rogue Valley, amateur radio exams are provided by the RVARC and the SOARC. New exam participants need to provide identification, while upgrading amateurs need to **provide a copy of their current license** as well as show identification. The exam fee for 2015 remains \$15.00. All license candidates must provide a picture ID. Upgrading amateurs must also provide a photocopy of their current license to send in with their application. To search for other exam locations, see:

<http://www.arrl.org/arrlvec/examsearch.phtml> or our club webpage: <http://w7dta.org>

Medford—Phoenix, OR

Time: Saturdays, Registration 8:30 AM. Exam session starts at 9:00 AM. Walk-ins welcome.

Location: Fire District 5 HQ. 5811 South Pacific Highway, Phoenix, Oregon 97535

Dates 2015: Feb 28 Jun 20 Oct 31

Contact: Don Bennett, Email: kq7bp@rfwarrior.com Phone: (541) 973-3625

Grants Pass

Time: Fridays Registration 6:00 PM. Exam session starts at 6:30 PM. Walk-ins welcome.

Location: Fruitdale Grange. 1440 Parkdale Dr., Grants Pass OR 97527-5288

Dates 2015: Feb 20 May 15 Aug 21 Nov 20

Contact: John Stubbe, K7VSU, email: jstubbe7@gmail.com Phone: (541) 218-2244

Roseburg, Bend, Redding, Brookings, Crescent City — Please see our club webpage, <http://w7dta.org> for updates as we receive schedules for these cities.

Next Club Meeting

**February 5, 2015, 7:00 PM Red Cross Building,
60 Hawthorne St., Medford, OR Across from Hawthorne Park
Program: Basic: How to Program your HT
Advanced: Radio Astronomy**