



# Short CIRCuits

December  
2020

SERVING CENTRAL ILLINOIS AMATEUR RADIO SINCE 1921

IN THIS ISSUE

## From The President

by Rick Suhadolc NgCKL

Merry Christmas to all.

This has been a very different year. Our members have been lucky all to stay well.

This Covid -19 virus continues to drag on into 2021. The new vaccines are providing a glimmer of hope that maybe we are getting back to normal again.

Ham Radio again is the ultimate lockdown communication method. The club has continued to make the gam coffee get together on the club repeater rather than the DQ restaurant in person meeting. We did get in a few in person DQ coffee get togethers this summer and it was so good to see everyone in person.

The sun spots are increasing and radio activity should be increasing, just in time for my retirement the first of January after 44 years of working as an engineer. I plan to have more time more ham radio and visit everyone at the DQ coffees in the morning.

Rick NgCKL



### Optimizing Receiver Performance

Article by Gary Huber AB9M

# Optimizing Receiver Performance

Article by Gary Huber AB9M

Here is the process to optimize receiver sensitivity for your given operating conditions:

1. Find a clear frequency on your VFO.
2. Set the receiver mode to CW and the receiver passband filter to 500 Hz. Turn off any noise reduction, RX EQ, or other option that will add gain to the receive audio. Turn both the AF and RF gain controls to minimum, then increase the AF control until you hear electron noise. Increase the RF gain until you hear an increase in the noise level. Note this setting level
3. Disconnect the antenna - You can select an antenna input with no antenna on it like RX Antenna or transverter port if your radio has one
4. Note the dBm reading or S-meter reading with no antenna connected.
5. Connect the antenna.
6. Note the reading in dBm or S-units This is where an accurate dBm calibrated S meter really counts.
7. If the noise goes up about 8-10 dB, you have the optimal RF preamp setting for the noise on your antenna for the given time of day and propagation.
8. If the noise with the antenna connected goes up significantly more than 10 dB, you have too much preamp gain, which will limit dynamic range for large signals. Reduce preamp gain.
9. If the noise goes up much less than 8 dB, increase preamp gain to get it closer to the 8-10 dBm increase.
10. If your radio does not have preamp gain settings but does have attenuator settings, you may be able use the attenuator to reduce the noise increase to 8 to 10 dB (or one to two S-units) when the antenna is connected.

Note: These settings will generally provide the total system RF gain required to demodulate weak signals in or close to the noise floor while the AGC is operating. At these settings very strong signals (or noise) outside of the selected bandpass are less likely to cause a reduction in gain from the AGC, which will cause the desired weak signal to be lost (AGC compression).

Also note, that each band and changing band conditions will require the above procedures to be redone. I have used this technique for more than forty years with both analog and digital radios. Although most of this piece is taken from <How to determine the amount of RF Preamp gain to apply for band conditions – FlexRadio > It has been edited, reduced to the detail, and modified for readability by Gary ~ AB9M

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Central Illinois Radio Club  
<http://www.qsl.net/wgaml/>  
Bloomington, Illinois  
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# AREA NETS

Tuesday 8:30 P.M. 28.450  
CIRC Open 10 meter Net

Tuesday 9:00 P.M. 146.640 (156.7PL)  
CIRC Open Net

Thursday 8:00 P.M. 28.450  
Vertical polarization is encouraged but not required

Sunday 08:15 A.M. 1.915  
Open 160 meter AM net

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If you are wondering where all the nets are, it was brought to my attention that many of these are no longer in operation. I have left the ones the CIRC handles directly.

If you want another net listed, please send me an email directly and please verify it is a current net and I will add it to the list.

Jeff KC9QQm

[Kc9qqm@gmail.com](mailto:Kc9qqm@gmail.com)

## AREA EXAM DATES

Following is the schedule for W5YI-VEC Amateur Radio exams for the year 2020. At the Community Room of the Bloomington Public Library located at the intersection of E. Olive St. and S. East St. Entrance off of S. East St.

Please bring two forms of identification. You must have an FCC issued FCC Registration Number (FRN) or Social Security Number. We cannot administer a test without your FRN or SSN. You will need a copy of your Current license plus any CSCE you want to apply.

2021 dates;

TBD

Exams' in Morton are held at the Morton Public Library, 315 West Pershing at 12:00 Noon the third Saturday of even numbered months and at the Peoria Superfest.

CIRC Meeting

Fourth Wednesdays of the month at 7:00 p.m. at the American Red Cross  
1 Westport Dr.  
Bloomington, IL 61704

\*\* Until further notice the meetings are virtual and only for members. We are sorry for any inconvenience. \*\*

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# Calendar of Events

Daily Coffee Klatch Monday thru Friday

\*\*\*\* The weekly Coffee Klatch has been moved to the 146.64 repeater for the time being. Remember the new PL is 156.7hz \*\*\*\*\*

9:00 a.m. at Dairy Queen Veterans at Cub's  
XYL's Join the OM's Monday and Friday

Weekly 10 Meter Net

Every Tuesday evening at 28.450 MHz- at 8:30 p.m.

Weekly 2 Meter Net

Every Tuesday evening on the 146.640-repeater at 9:00 p.m.

Weekly 6 Meter Net

Every Wednesday evening at 50.135 MHz at 8:00 P.M.

Weekly 160 Meter AM Net

Every Sunday morning at 1.915 MHz at 8:15 A.M.

## 75 Meter HF Traffic handling nets

NET / TIME	FREQ khz
<b>NORTH CENTRAL PHONE NET</b>	
M-F 7:00 A.M. central time	3912
<b>ILL. PHONE NET</b>	
M-F 4:45 P.M. central time	3857
SUN. 8:00 A.M. central time	3940
<b>ILLINOIS SIDEBAND NET</b>	
M-SAT. 6:00 P.M. central time	3905
<b>75 METER INTERSTATE SIDEBAND NET</b>	
DAILY 0100 UTC	3985
<b>ITN INDIANA TRAFFIC NET</b>	
DAILY 1230 UTC	OR
2200 UTC	3912

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CENTRAL ILLINOIS RADIO CLUB  
P.O. BOX 993 BLOOMINGTON, IL 61702-0993

WEB PAGE

[HTTP://WWW.QL.NET/W9AML/](http://www.ql.net/w9aml/)

*President: Rick Suhadolc  
(N9CKL)  
Vice-President: John Payne (AC9TN)  
Secretary: Rob Cherry (N9TO)  
Treasurer: Larry Gibson (W9BJG)  
Member at large: Grant Zehr (AA9LC)  
Newsletter Editor: Jeff Lovell (KC9QQM)*

*The CIRC is a not-for-profit ARRL special service club whose purpose is to advance the service of Amateur Radio. Located in Central Illinois, the CIRC and its members welcome all to use the 146.64 repeater and to attend club meetings.*

# Short CIRCuits

P.O. Box 993  
Bloomington, IL 61702