

Nacogdoches Amateur Radio Club

2017 CLUB OFFICERS

Pres: John Cechin - W5FWR

Vice Pres: RM Blake - K5AGE

Sec/Treas: Army Curtis - AE5P

Visit our web site at

<http://w5nac.com/>

MISSION STATEMENT

The Mission of the Nacogdoches Amateur Radio Club is to support and promote Amateur Radio by public service, offering training to unlicensed interested parties and licensed Amateurs, mutual support of other Amateurs, engaging events that promote Amateur radio to the general public and other Amateur radio operators, and continuing fellowship by regularly scheduled organized meetings and events and having fun.



JANUARY MINUTES

The January meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on January 4th. **President John W5FWR** opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Twenty members and one guest were present. Each person present introduced them self. Minutes of the previous meeting were approved as published. The Treasurer's report was read.

Secretary-Treasurer

Army AE5P asked for a vote to approve a \$500

donation to Christ Episcopal Church as a token of appreciation for letting us use their facilities for our meetings and VE exams. Approved.

Several upcoming events were reviewed, including the January ARRL VHF Contest. Due to several people planning to be out of town that weekend, our normal roving event was cancelled.

Meeting closed at 7:39 p.m.

Program:

Army AE5P presented a program on QSLing, with an emphasis on Logbook of the World (LOTW).

DUES ARE DUE

That time of year again. 2017 Club dues are due

and payable. \$24 covers all licensed hams in a family and can be paid to the Secretary-Treasurer at the club meetings, the weekly lunches, the VE testing sessions, or mailed to him at home.

MY 2 CENTS FOX WILLY ROGER

FEBRUARY 2017

February 2017, how time flies, it seems that just the other day it was January. This month brings a few things to keep in mind, Ground hog day, and Valentine's day, and remember to get your sweetie something real nice or you might be sleeping in the street, my Mother and one of my sisters birthday, and last and most important is the Columbia SES.

The program last meeting was a good one QSL cards are a good way to show your friends something about your hobby, thanks Army; I can't wait for the next program.

Question:

How did the 12V battery come to be standard for autos?

Question:

Who came up with the pencil sharpener?

The word tree is a bit better these days but still slow, all I can do is wait for better times.

REMEMBER:

Sun visors on the outside of the cars?

Metal dash boards?

Kitchen cook stove with off the floor legs?

THE CRAZY CAT GUY:

The other day I was trying to cut down the growth around my roof line, I stopped to take a break and was sitting on my park bench and pulling up the extension cord when Jerome saw the movement in the grass. The question was "what the h... was this? It moves like a snake, so this opportunely was too good to pass up, every time Jerome got close to the cord I moved it, ever see a cat fly straight up, that's right, up? This went on a few

times when I pulled the cord even harder, this time Jerome not only went up but back about a foot, I had to try it a few more times. Jerome got tired of this and started to chew on the cord, that's when I stopped the game. The Brothers Clouds "that's what I am calling the Snow twins this week" are still hanging around close to the home base, but one of them seems to venture around the neighborhood, as well as the other members of the pride, but most of them show up for meal time. Every time I go out I remind the pride to go out and get a job and bring in some money for their keep, the other day when I got home I found a dollar bill as I stepped out of the car, all I can say to this is these guys don't know what things cost to day, I think they must be in the fifty's. The number of feeders still runs about twelve or so. Speaking of feeding time, the pack is so tight around the food bowels that the food is on the ground more than in the bowls. This morning Rolly Polly saw something

on the floor and seem to please her, she jumped at it and pulled back, she did this several times when it was time for a jump attacks, stepped back about a foot wiggled her back side and got a good grip with the back feet and jumped, Rolly Polly did this about four times, but the thing is that her back feet never left the floor, too much food I guess?

"THOUSANDS OF YEARS AGO CATS WERE WORSHIPED AS GODS THEY HAVE NEVER FORGOTEN"

I don't have to leave so many spaces these days now that we have a VP. Don't be shy, and fill up the pages, you try it sometimes, but you can't use my Word Tree.

LIVE WELL, LAUGH OFTEN, LOVE MUCH!!!!

Let me know, what do you think?

KEEP YOUR POWER DRY AND YOUR HEAD BELOW THE HORIZON.

HAPPY TRAILS

John Cechin W5FWR
Carrots4ever2@gmail.com

FROM THE VICE PRESIDENT

BOOK REVIEW

**Contact Sport: A
Story of Champions,
Airwaves, and a One-
Day Race around the
World
By
J.K. George**

This book is named 'Contact Sport'. It is about the World Radiosport Team Championship, which is held every 4 years. The WRTC is held during the normal IARU contest, which occurs annually.

The IARU and WRTC are 24 hour contests. In fact, the regular annual IARU contest was just held in June. I lightly participated (35 contacts) but mostly I learned about correctly submitting a log. My

greatest feeling was seeing my score posted on "logs received".

As stated before, the WRTC is held every four years in changing venues. The teams are a two operator group, using "standardized" locations, provided standardized antenna setups, power limit of 100w, and a large empty tent. I picked the book up used, on impulse because the cover looked interesting, and I am somewhat attracted to contesting. The book is a great read, and the author has a writing style that is easy to read. I read it in couple of days' time.

This sporting event is the only event where the audience, you and I, get to participate! In fact, I won't spoil it, but these guys make a ton of contacts, and the operators are so top notch, that many of the scores can be quite close! Some hearts were elated or broken depending on the confirmation of a contact by us (the audience) correctly

submitting our logs! How cool is that!?

73 de RM Blake K5AGE
k5age@fastmail.com

NOTES FROM OUR EC

Winter is upon us. But, this is Texas and we have all four seasons in 3 days. Recently, the weather blew up. Tornadoes were reported in the Dallas-Fort Worth area and in Louisiana. Tornadoes can pop up at any time in any season as long as the weather conditions are right. With that in mind keep up with your equipment.

Is there anyone who might be interested in having a refresher, weather observer course from the National Weather Service? It's been awhile since we've had a weather observer course.

Maker's Space. I took Jan 23rd off. I spent some time doing the library thing and noticed on their sign they were going to have during a

Maker's Space activity called Creativity Soldering. I came back for the activity. There was a nice turnout of youngster and some not so young. This particular activity was to acquaint the participants with soldering and was more of an art activity than electronics based, even though there were a few questions about soldering for circuit boards. I was able to field the questions for the staff member. It went okay. The participants did get a chance to get things hot, flow a little solder and learn you can solder on steel. The Library's activity guide has a full list of things that are going on in the Maker's Space. Not all of it relates to ham radio, but there may be other things that you have an expertise with. Don't hesitate to stop by Monday's at 5:30 pm and see what's shaking.

Digital Comms. The February issue of QST has a good article on digital communications and net operations. I won't do a synopsis of the article.

Please take some time to read it. It shouldn't take much more than 2 or 3 sips of your coffee to get through it. One significant change to the article, the website listed on the page is no good. I contacted Steve Ford, WB8IMY, and he said that just before they went to press the organization moved to Facebook and closed the website. If you use Facebook, the link to the page is www.facebook.com/groups/OHDEN I will spend some time digging through the group pages and their standard operating practices/guidelines.

Next month I'll pick up my discussion on the configurations of FIDigi and AndFIDigi.

Another question, is there enough interest to try a net using fldigi/andfldigi? You can drop me a note at jlchapman2@juno.com for this and the NWS question.

Don't forget Valentine's Day will be coming soon. Remember to get that

special someone that special something for that day.

73 de John Chapman
KC5MIB
jlchapman2@juno.com

VE TESTING

Our next VE testing is scheduled for **Wednesday February 15 at 7:00 p.m.** in the Parish Hall of Christ Episcopal Church.

Applicants should bring a picture ID, the original and a copy of their current Amateur license, the original of any CSCE's and \$15 to cover the cost of the exam(s). Correct change is always very much appreciated. 73 de AE5P
email: ae5p@arrl.net

CLUB NETS

Remember to join us each week for the nets sponsored by NARC. Each **MONDAY** is the **NARC ARES/RACES** net, at 8:00 p.m. on the club's 146.84 repeater (PL 141.3). Second, on

THURSDAY evenings at 8:00 p.m. is the **Deep East Texas Skywarn Emergency Weather Net** on the 147.32 repeater (PL 141.3). Please join us for one or both.

NEXT MEETING

The next meeting will be **Wednesday February 1st at 7:00 p.m.** in the Parish Hall of Christ Episcopal Church. A program is planned.

VE TEST RESULTS

Jeff Marcotte from Bossier City, LA drove over to take and pass his Tech and General exams. Jeff's new call is KG5RKU. Congratulations.

TECHNICAL TIDBITS

When good coax goes bad, it's often due to water ingress. [DX Engineering has published a technical tip](#) showing how to use a combination of rubber

splicing tape and vinyl tape to make weatherproof coax connectors.

The Flexradio folks have shared an [application note regarding grounding in the shack](#). Single point grounding and the differences between RF and electrical grounding are among some of the topics discussed.

SHUTTLE COLUMBIA SPECIAL EVENT STATION

Our annual Shuttle Columbia Special Event Station operation is scheduled for the weekend of February 4 - 5, which is coming up fast. We plan to continue our practice of letting club members operate the event from their home stations using the special event callsign of K5C.

If you wish to operate from your home station for this event, please contact the Secretary as soon as possible and advise what band/mode you want

to use and your preferred operating times.

The Shuttle Columbia was lost over East Texas on February 1, 2003. NARC has conducted a special event since 2004 in remembrance of the Astronauts who lost their lives that day, and the hundreds of Amateur Radio operators who assisted authorities in searching for and recovering thousands of pieces of debris. Please help us continue this proud tradition.

UPCOMING EVENTS OF NOTE

Mark your calendars for the following events coming up in the next few months. Full information on these events and much more can be found at <http://www.hornucopia.com/contestcal/contestcal.html>

NARC Shuttle
Columbia Special
Event Station

K5C

Feb 4 - 5

<http://www.w5nac.com>

CQ WW RTTY WPX
Contest

Feb 11 - 12

<http://www.cqwxrtty.com/rules.htm>

ARRL International
DX Contest - CW

Feb 18 - 19

<http://www.arrl.org/arrl-dx>

North American QSO
Party - RTTY

Feb 25 - 26

<http://www.ncjweb.com/N/AQP-Rules.pdf>

ARRL International
DX Contest - SSB

Mar 4 - 5

<http://www.arrl.org/arrl-dx>

CQ WW WPX Contest
- SSB

Mar 25 - 26

<http://www.cqwx.com/rules.htm>

San Jacinto Day
Special Event Station
K5T

Apr 21 - 23

<http://www.w5nac.com>

CQ WW WPX Contest
- CW

May 27 - 28

<http://www.cqwx.com/rules.htm>

ARRL June VHF
Contest

June 10 - 11

<http://www.arrl.org/june-vhf>

ARRL Field Day

June 24 - 25

<http://www.arrl.org/field-day>

Basic Filters - Part 2

by
Thomas Atchison, W5TV

In the last article, Basic Filters, Part 1, we discussed the RC low pass filter shown in Fig. 1.

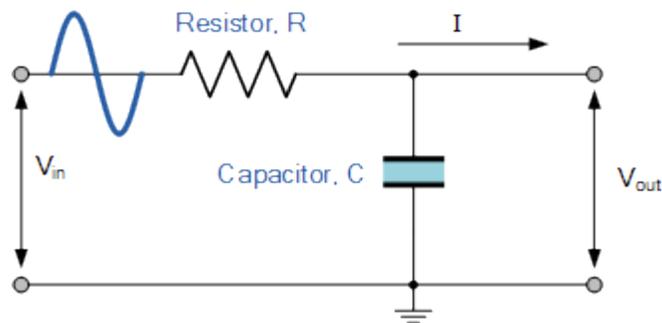


Fig. 1.

In this filter we know that the capacitive reactance of the capacitor, C , is given by the formula

$$X_C = \frac{1}{2\pi fC} \quad (1)$$

where f is the frequency in Hertz(Hz) of the input signal, C is the capacitance in farads(F), and X_C is in ohms(Ω).

Let's look at an example. Suppose $C = 0.000470\mu F = 0.000470 \times 10^{-6} F$ and $f = 7.15 MHz = 7.15 \times 10^6 Hz$. Then the capacitive reactance is

$$\begin{aligned} X_C &= \frac{1}{2\pi fC} = \frac{1}{2(3.14159)(7.15 \times 10^6)(0.00047 \times 10^{-6})} \\ &= \frac{1}{0.0211} = 47.4 \Omega. \end{aligned} \quad (2)$$

If we increase the frequency to $f = 14.1$ MHz we have

$$\begin{aligned} X_C &= \frac{1}{2(3.14159)(14.1 \times 10^6)(0.00047 \times 10^{-6})} \\ &= \frac{1}{0.042} = 24 \Omega. \end{aligned} \quad (3)$$

Observe that as we increased the frequency the capacitive reactance decreased.

We talked about capacitive reactance in Part 1. Note that the frequency, f , is in the denominator of equation (1). As the frequency increases the denominator gets larger so the fraction gets smaller. That means that the capacitive reactance decreases as the frequency increases. This behavior was mentioned in Part 1.

Impedance is the measure of resistance to the flow of current in a circuit. Since we have current, I , flowing in the RC loop of Fig. 1, the impedance to this current is given by

$$Z = \sqrt{R^2 + X_C^2}. \quad (4)$$

If we think of Fig. 1 as a potential divider circuit consisting of two resistances in series, R and X_C , then the equation connecting voltage in (V_{in}) and voltage out (V_{out}) is the following:

$$V_{out} = V_{in} \left(\frac{X_C}{\sqrt{R^2 + X_C^2}} \right) = V_{in} \frac{X_C}{Z}. \quad (5)$$

Since the right hand side of equation (5) depends on the frequency, f , we can determine the output voltage for any given frequency in terms of the R and C . As we discussed above, the capacitive reactance decreases as the frequency increases. Referring to equation (5), as the capacitive reactance decreases Z gets close to R so the fraction

$$\frac{X_C}{Z}$$

gets small. This means that

$$V_{out} = V_{in} \frac{X_C}{Z}$$

becomes smaller. This describes the behavior of the low pass filter in Fig. 1.

We still need to discuss how to find the cutoff frequency of the filter. That will be our next topic.