

Nacogdoches Amateur Radio Club

2019 CLUB OFFICERS

Pres: Jack York - KG5POU

Vice Pres: Bill Rascher - KT5TE

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.



DECEMBER MINUTES

The December meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on December 5th. **President RM K5AGE** opened the meeting at 6:10 p.m. in the Parish Hall of Christ Episcopal Church. Twelve members and seven guests were present. Each person present introduced them self. Minutes of the previous meeting were approved as published. The Treasurer's report was read.

Our 2019 new officers were recognized and installed.

Meeting was closed at 6:13 p.m., fulfilling our promise that it would be A VERY SHORT business meeting this month and setting a new all-time record for the shortest NARC meeting ever.

Tom W5TV offered a blessing and the group helped themselves to some delicious pot luck goodies.

About 7:30 our stand-in auctioneer **AE5P** began the White Elephant Auction, which saw many great deals and netted the club \$313 for the treasury. Many thanks to all who participated.

2019 DUES ARE DUE

Dues are now just \$20 a year and cover all licensed hams in a family.

FROM THE PRESIDENT

WHO IS YOUR MASTER?

I write this article during the Christmas season but by the time of its publishing the season will have passed. I wish to focus on what Christmas means to you and me then answer the question ... who is your master?

To start, Christmas was the time in history where God intervened in the affairs of men to alter how anyone who is willing and called could be given atonement. To be sure, without atonement, that person will be required to give an account based on their own merits. This atonement came in the form of Jesus - the son of God, the son man, savior. I would argue that through self-examination and reflection He is the only hope of reconciling for peace with God.

Jesus was born to die to provide the way man's sin is forgiven so he can be free in this life and the life to come.

Paul in his letters the Romans chapters 5 and 6 talks about the hope of man even through tribulation. The hope he speaks of stems from a faith, being justified, and resulting in a peace that comes only through Jesus. With God's peace and hope, man can endure all but without Jesus can no man have hope or peace circumstances notwithstanding. His peace and hope is both priceless and free. To miss out on this in life due to suffering (which causes one to blame God) or success (which causes one to forget or worse... not need God) would be a mistake.

And so we come back to the beginning. What is Christmas and who is your master?

Christmas - To me it is the greatest gift to man that really cost God but can seem so trivial to man without a proper understanding and appreciation. What parent would give their child be murdered at the hands of wicked men to pay a debt they did not even believe they owed, nor were they asking for is beyond comprehension to me. And that is how I explain what God did through Jesus. He was that gift born on Christmas.

Who is your master? - If you understand that outside of Jesus there is no remission of sin and accept by faith the truth, then Jesus is your master and you should act accordingly. This is the path I have accepted and this is what makes Christmas the most special time of the year.

Merry Christmas

73 de Jack York

KG5POU

gtjakco@yahoo.com

FROM THE VP CHAIR

Another year started and a whole slew of things to get done that weren't accomplished last year. Or the year before...

I have just learned a purchasing lesson the hard way. For my brothers observatory's ham radio setup I purchased 200' of #4 stranded bare copper online from a big box store whose name rhymes with "knows". This wire is to be used for the ground system around the observatory. The plan was to save time and money since no matter where the wire was purchased it would have to be ordered. It is a 50 mile round trip to Palestine, and it isn't a pleasant trip like that quick run to Clear Springs each Wednesday. About 3 days later the wire arrived in a 2' x 2' x 3' box with air bag packing. Yeah, nice packing for copper wire. Go figure.

The problem was they shipped a 200' spool of wire with 160+ feet on the spool. I was surprised and concerned that without unrolling the spool how could I trust what someone wrote with a sharpie over the label? Wasn't the order for 200'? The next day UPS delivered about 20' in a small box. This didn't sit well with me and my blood pressure was rising. By the following morning I was thinking "I can make this work". With cadweld I could use that 20' to run between several ground rods. Then another package arrived. I saw the name on the package and thought here is the last 20'. WRONG! It was 18.5 feet. This is math I can do in my head, and now the blood pressure went up some more. OK. Not a problem I can make do and won't use the internet to purchase wire again. What about that last bit of wire? And is the spool really 160'? What happened next answered all those questions. The nice USPS lady drove up

our long lane to deliver a padded envelope with the rest of the mail. Guess what was in the envelope? That's right, 18" of wire taped end to end. To say it nicely I was put out (PO'ed). I took it all to the big box store in the Holy Land and got my money back. And then on to the local electrical supply store (I think the original store is in Nacogdoches?). It is worth the extra \$.05/ft to get it right the first time.

As for Watership Observatory the grounding / bonding is almost finished. Next, I need to get my brother down on Mondays and Wednesdays for net meetings. <grin>

73, Bill KT5TE

bill@watershipfarm.com

NOTES FROM OUR EC

I originally started this column Christmas evening. Not a lot happens during the holidays, but sometimes the brain doesn't fire on all cylinders. So let's try again.

I'm sure you may have noticed, we received a lot of rain the end of the month. The airport registered almost 3 inches. A few of the SKYWARN participants had reports of 3, 4 and 3 inches. The plant recorded just over 4 inches and La Nana Creek was well out of its banks at 2:30 Thursday afternoon as I came in to work. Tornado Watch 445 was issued for Nacogdoches and surrounding counties in the ARK-LA-Tex region. Another reminder that tornadoes and conditions that form tornadoes can occur any time through the year, just some months are better (if you want to call it better) than others.

Was Santa Claus good to you? Did you get a new radio, wire for that new skyhook, or did you appropriate (stealing sounds so criminal) the batteries for other gifts to supply your handheld. Are you making some new resolutions for 2019 or rehashing some old ones?

What will you do in the ham radio arena next year? Mentor, become a volunteer examiner, upgrade your ticket, chase some DX, try a new mode? The beauty of Amateur Radio, there is so many things to try and do at the buffet that you might not be able to hit it all.

I hope everyone had a merry Christmas and that you have a very happy and prosperous New Year.

73 de John Chapman
KC5MIB

jlchapman2@juno.com

VE TESTING

Our next VE testing is scheduled for **Wednesday January 16 at 7:00 p.m.** in the Lunch Room of Christ Episcopal Church School.

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

TWO METER CLUB NETS

Remember to join us each week for the two meter 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 January 2nd
at 7:00 p.m. in the Lunch
Room of Christ Episcopal
Church School.

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>

Note that all dates shown here are local, CST dates while all contest logging uses UTC dates and times.

ARRL RTTY Roundup

Jan 5, 2019

<http://www.arrl.org/rtty-roundup>

North American QSO Party, CW

Jan 12, 2019

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

North American QSO Party, SSB

Jan 19, 2019

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

ARRL VHF Contest

Jan 19-20, 2019

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

SHUTTLE COLUMBIA SPECIAL EVENT

Feb 2-3, 2019

K5C

CQ WW WPX RTTY

Feb 8-10, 2019

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

ARRL INTL DX - CW

Feb 15-17, 2019

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

North American QSO Party, RTTY

Feb 23, 2019

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

ARRL INTL DX - SSB

Mar 1-3, 2019

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

CQ WW WPX - SSB

Mar 29-31, 2019

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

SAN JACINTO DAY SPECIAL EVENT

Apr 20-21, 2019

K5T

Solid State Devices Part 3

by
Thomas Atchison W5TV

We now want to consider a solid state device that consists of two negative type semiconductor materials with a thin positive type of material sandwiched between them as shown in Fig. 1

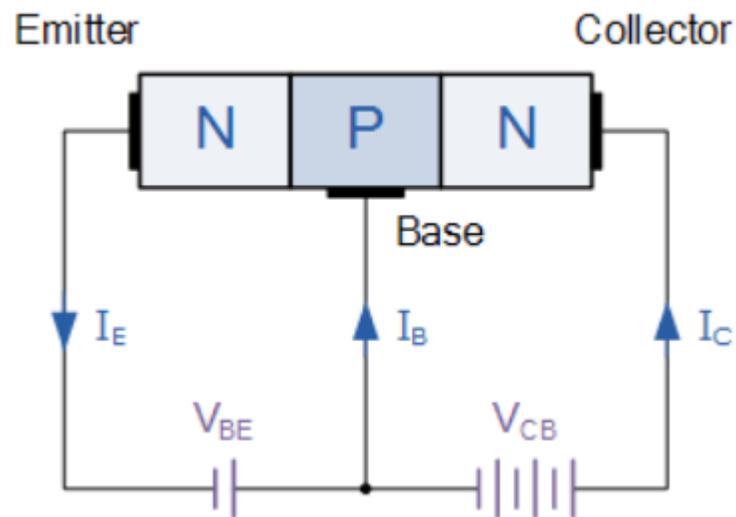


Fig. 1

This is like the PNP transistor we considered in the last article with P-material and N-material interchanged. It is referred to as a bipolar NPN transistor. The symbol used for this device is shown in Fig. 2.

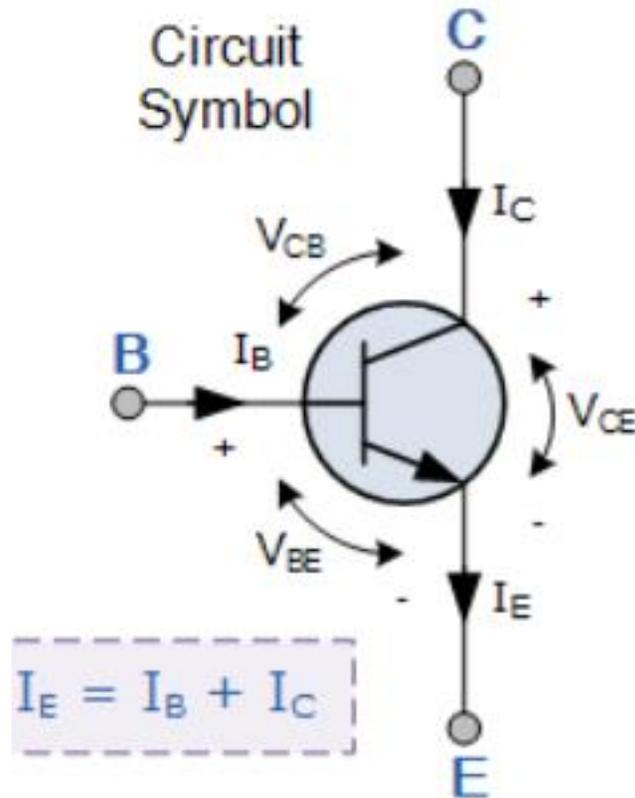


Fig. 2

Note that the arrow is Not Pointing in. By convention, the direction of current on diagrams is shown as the direction that a positive charge would move. This is called conventional current. Inside a bipolar transistor, currents can be composed of both positively charged holes and negatively charged electrons. The arrow is always on the emitter and it indicates the conventional current flow, not the electron flow. This is not unusual; remember that in the diode-symbol the arrow points in the direction of conventional current. Also, the arrow is always on the emitter in both the PNP and the NPN transistor.

Referring back to Fig.1 above we see that the emitter has a negative voltage and the base has a positive voltage. The base region attracts free electrons from the emitter. These free electrons are moving fast enough to move right through the base. Once they enter the collector material then the positive bias voltage on that region continues to attract the electrons.

In Fig. 2 the equation $I_E = I_B + I_C$ shows the relationship among the emitter current (I_E), the base current (I_B), and the collector current (I_C). These, of course, are caused by the voltages that exist as indicated in Fig. 2. As we increase the base current we

find that the collector current also increases. In fact, the collector current varies directly with the base current. Eventually, we will find that increasing the base current further does not increase the collector current. When the collector current reaches a maximum value, we say the transistor is saturated. This means the collector circuit gathers all the charge carriers the emitter injects through the base. I have been focusing on NPN transistors so the charge carriers are electrons. The same sort of analysis can be done for PNP transistors. In that case the charge carriers are holes.

Now, if we place a voltage to generate a large collector current, we can control that current with a smaller base current. This amplification and control makes a transistor useful. A simplified diagram of what we are saying is shown in Fig. 3.

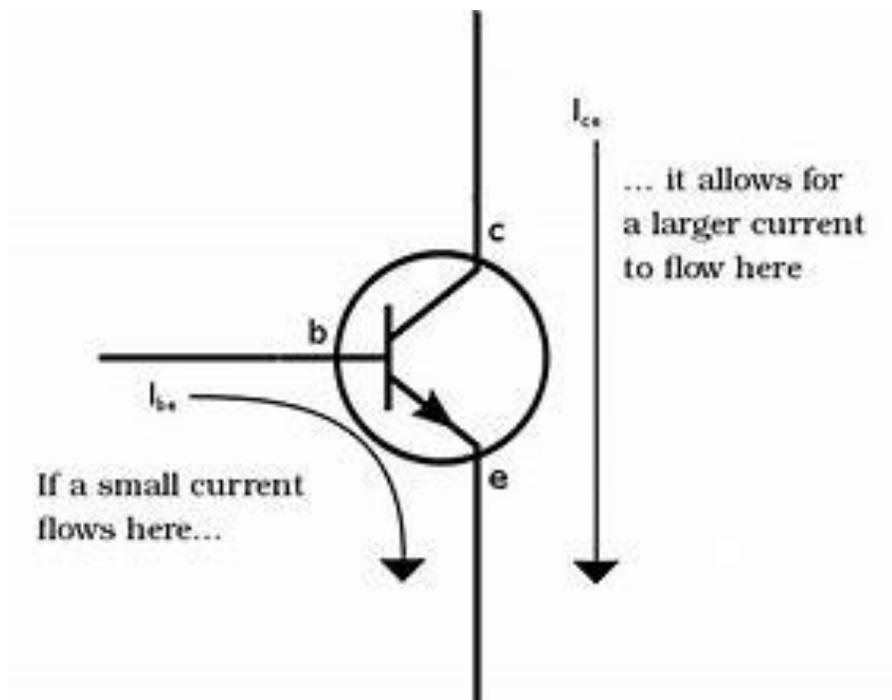


Fig. 3

Reference: Larry D. Wolfgang, WR1B, *Understanding Basic Electronics*, the American Radio Relay League, 2002.

**MY TWO CENTS
FOX WILLY ROGER**

JANUARY 2019

Well now, how many of you got Christmas gifts that you don't have to exchange? For myself, I received a new phone, along with that I lost of my information that I had on my old phone.

Well 2019, that shoots another year in the back pockets. It seems like that the years are now about six months long, I can remember when a year was a full twelve months long, is that how you see it? I now understand the real meaning of the old saying "THE GOLDEN YEARS".

How did the poll turn out, were the results published? I for one am interested in the outcome.

What was the white elephant, who got what, and who won the costume contest, but most important, did everyone have fun, fun that will last till next time?

Now that the major holidays for 2018 are history, and the kids or grandkids are back into the old routine of doing whatever, the adults can settle back and pay off the cost of Christmas past. As for myself, I like the idea of wrapping empty boxes and place them under the tree, when the kids misbehave, take one of the gifts and throw it away. An old Christmas custom was to fill the Christmas stocking with coal, now I would like that, I could burn the coal in the fireplace.

Jack is steamed this month, I asked him to cool off and rewrite his part. All Jack would say is that he would send his column into AE5P without letting FOX WILLY ROGER view it, so "reader beware". Well now that winter officially has started we can dig out our heavy coats, boots, and snow shovels, and get ready for some more fun. Some of us are in good shape with flat or almost flat driveways, W5TV and WK5F take care. TWT is confused, hot, dry, wet, cool, dry, wet, can TWT have a nervous breakdown? I'll have to check with Jack, when he's talking to me again.

QUESTION:

Why does a plastic item on a car costs more to replace than the same part made of metal?

Why is it when you watch reruns on television the people keep making the same mistakes?

If it's bad to take your eyes off the road, why is it the auto manufactures install monitors in the autos?

REMEMBER:

Remember when pickup trucks came with only two doors?

Remember when you could purchase food without the fear of getting sick?

Remember your first set of wheels, tricycle, scooter, or a radio flyer?

COMMENTARY:

What the hell is going on?

From day one, it seems, the congress dug its heels into the ground and refuses to work with or even try to work with the president. Is it because that the president isn't a politician good old boy, or is it easier to do that than work for the people that hired them? If you know let us know. What if there weren't any "parties, no democrats or republicans", each person would run on his or her agenda, not on a party line. When are the congress people going to work for the people? Why can't the people fire a congressperson for doing a bad job rather than waiting for the next election? On that subject, why does the government produce currency, give the people an computer chip in their person that will replace "coin of the realm", just swipe your chip.

I have many questions on many subjects, but I have a few answers, throw your two cents into the ring.

GUEST COLUMNIST

JACK TALDI

THE CRAZY CAT GUY:

TB spends about 80% of time out side, she seems to take to the elements better now than at first, but she likes to be inside when nasty weather visits, **TB** comes in to eat, I don't know if she knows how to "eat off the land yet". The bedroom window is used once in a while now. **RP** goes outside mostly in the morning, sometimes during the day, runs out the door and sits on the sidewalk and looks.

RP has decided that the house is hers now and **TB** is an unwanted visitor, I have to put up the pet/child gate so **TB** can come in and eat.

I think I spoke too soon; I was trying to get **TB** into the house to eat. **RP** took this opportunity to escalate the living conditions, **RP** charged outside and took after **TB**, and the chase was on, I don't know where they went or what happened but **TB** came back about four hours later. I'm still haven't seen **RP**, it's been over six hours, I might be down to one pet.

TG is **TG**, still comes to the front door to eat, I found that he isn't a dummy, when it is wet **TG** waits until dry weather is the order of the day.

Heckle and Jackal are still visiting, now and then. I can't shake the feeling that when I am outside **H&J** are sizing me up for dinner.

**DOGS HAVE MASTERS
CATS HAVE SERVENTS**

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

**BE THE KIND OF WOMAN/MAN THAT WHEN YOUR FEET HIT THE GROUND
EACH MORNING THE DEVIL SAYS, "OH CRAP, THEY'RE UP!"**

LIVE WELL, LAUGH OFTEN, LOVE MUCH!!!

KEEP YOUR POWER DRY AND YOUR HEAD BELOW THE HORIZON

HAPPY TRAILS

John Cechin W5FWR
Carrots4ever2@gmail.com