

# Nacogdoches Amateur Radio Club

## 2018 CLUB OFFICERS

Pres: RM Blake - K5AGE

Vice Pres: Jack York - KG5POU

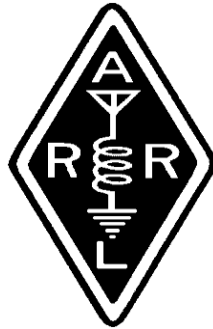
Sec/Treas: Army Curtis - AE5P

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.



## MARCH MINUTES

The March meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on March 7th. **President RM K5AGE** opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Fourteen 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.

**Bob K5ME** reported he worked a station in South

Sudan on 30M CW, an all-time new one for him.

**President RM** is asking for volunteers to help provide communications for the Old Stone Fort Bike Ride, April 14, at the Expo Center.

**Army AE5P** reminded everyone of the Texas State Parks on the Air event scheduled for April 7-8.

The **San Jacinto Day Special Event** is scheduled for April 21-22, using the call **K5T**. This will be handled similar to how the Shuttle Special Event was done in February. Members are encouraged to operate the event from their home stations using the special K5T callsign. Please contact **Army AE5P** to reserve your time(s) and mode(s).

Meeting closed at 7:29 p.m.

**Show and Tell:**

**RM K5AGE** showed some hand warmers that could be very helpful to hunters or anyone outside during cold weather.

**Army AE5P** showed several examples of the uBITX software controlled radios that he, **Jim WA5GVQ**, and **Tom W5TV** have recently acquired. The radios are made in India and provide a QRP transceiver with continuous coverage from 3-30MHz for just \$109.

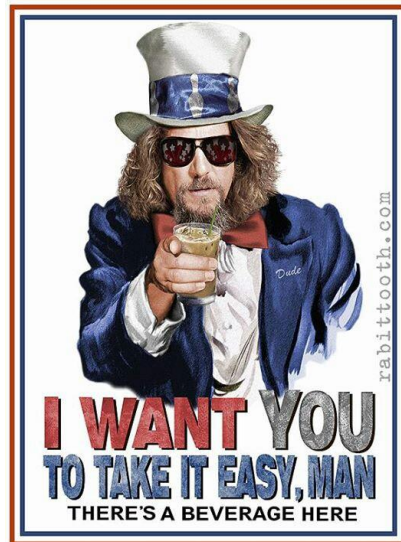
**Program:**

**Tom W5TV** gave a most interesting presentation on circuit simulators, and demonstrated how they can be used to investigate the operating details of electronic circuits.

**2018 DUES ARE DUE**

Dues are still just \$24 a year and cover all licensed hams in a family. If you have not yet paid, you can bring your dues to the next meeting, to any of the weekly NARC lunches at Clear Springs Café, or mail them to AE5P. Checks should be made out to NARC.

**FROM THE  
PRESIDENT**



This area is reserved for the President's column. Unfortunately, no column was received from the President this month.

73 de RM Blake K5AGE  
[k5age@fastmail.com](mailto:k5age@fastmail.com)

## From the VP Chair

### Battle of the Antenna

I hope everyone had a blessed Easter giving thanks for the sacrifice Jesus made and celebrating the weekend with family and BBQ. Some people even take this time from work to clean around the house - out with the old, in with the new. This cleaning business brings me to something radio related - antennas.

At my house all my antennas are home-brew, however, they were not of a complementary décor to the backyard with guy ropes and three poles for the dipoles strewn about the place. The setup was not exactly clean by my wife's definition. As a result I have been off the air for several months because my antennas were not pleasing to the eye and were taken down.

### So Now What??

The goal is now finding alternative construction methods that will make the antenna "invisible". While reading on the subject I read an article on QRP field antennas and these may fit the bill. There are two maybe three candidates: 1. the inverted v dipole fed with 300 ohm twin lead; 2. a ground plane with two radials and a vertical fed with a soldered and sealed coax; 3. an end fed zepp.

I will plot my success or failure in subsequent posts along with the penalties of failure since this project will be undertaken against the wishes of my betrothed.

Stay tuned and wish me luck!

73 de Jack York

KG5POU

[gtjakco@yahoo.com](mailto:gtjakco@yahoo.com)

## NOTES FROM OUR EC

Spring 2018 has arrived bringing plenty of pollen and dust and driving a number of us into coughing fits, your humble scribe included. The 29 March Skywarn net had rainfall reports from 2 1/2 inches to 5 1/2 inches (Cal in Diboll). Maybe it will knock out the pollen and settle the dust. I'm hoping.

Let's take a different tack this month.

Why amateur radio? Why RACES? Why ARES? Why SKYWARN?

RACES: Radio Amateur Civil Emergency Service, established by Part 97.407 to provide emergency communications in times of an emergency. (Public Law) SKYWARN: a volunteer program of trained severe weather spotters to help keep their local communities safe by providing timely and accurate reports of severe

weather to the National Weather Service. (NOAA-NWS, Federal Agency)

ARES: Amateur Radio Emergency Services, trained radio amateurs who provide public communications support (ARRL, national organization)

The simplest answer is we can get the comms done. We can make the connection when other modes can't, i.e. cellular, public safety radios (PD, FD, EMS, or pick your favorite federal 3 letter agency).

The ham radio infrastructure covers most of the state. There are almost 1700 repeaters across the state that cover 10 m to 23 cm. Many of them are linked into extended systems, some even crossing state lines. Now I will caveat this. I'm just not sure how good the ham radio coverage in the bottom of Big Bend or the Palo Duro Canyon.

Ham repeater coverage in many places is far better than the cellular services. There are a couple of large holes on Texas 21 and 7 just west of Nacogdoches and east isn't much better. NARC has seen from previous history just how "good" the cellular coverage is in the East Texas forests during the Columbia disaster.

Modes of operation. We have that covered, too. Voice: SSB, AM (yes I know, blasphemy), FM and Digital voice; Data: various forms of frequency shift or phase shift keying (MFSK32, etc) RTTY and of course CW. The newer software allows hams to pass "record" traffic, in other words, official messages on official forms. Some areas even have amateur television so we can have video at 11.

Lastly, portability. Most of us have a handheld radio or some type of mobile radio that operates with and through a repeater. We have even taken mobile radios and configured a package to take them into

a shelter or an operations center. All of us have read of the efforts to provide comms for Puerto Rico. We can pick up and go.

Why amateur radio? Because we can get it done. Through our practice on the nets and helping in public service events we get just a little better.

Everyone, thanks for your support of our nets. Please join us and if you can the other nets in the area.

73 de John Chapman  
KC5MIB  
[jlchapman2@juno.com](mailto:jlchapman2@juno.com)

## VE TESTING

Our next VE testing is scheduled for **Wednesday March 21 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](mailto:ae5p@arrl.net)

## NEW HAMS

Our VE exams in March produced an upgrade and two new hams. Congratulations to Tim Evans KG5YNA from Huntington, TX on his upgrade to General and to new hams Kermit Good (new General) from Bullard and David Sampson (new Technician) from Nacogdoches. Callsigns had not been issued as of the date of publishing this newsletter.

## 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 April 4th at 7:00 p.m.** in the Parish Hall of Christ Episcopal Church.

## SAN JACINTO DAY SPECIAL EVENT

**San Jacinto Day** is the celebration of the Battle of San Jacinto on April 21, 1836. It was the final battle of the Texas Revolution where Texas won its independence from Mexico.

This is the second year of the **San Jacinto Day Special Event** by NARC

which we hope will become an annual affair. We will again be using the special call of K5T for the event. Members are encouraged to operate from their home stations for the event, which will be held April 21 - 22, Saturday and Sunday.

If you wish to operate from your home station for this event, please contact the Club Secretary and advise what band/mode(s) you want to use and your preferred operating times.

**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.contestcalendar.com/contestcal.html>

Items in RED are NARC Club Events

Texas State Parks on the Air (TSPOTA)

Apr 7-8

SAN JACINTO DAY SPECIAL EVENT

Apr 21-22

K5T

DAYTON

HAMVENTION

GREENE COUNTY FAIRGROUNDS, OH

May 18-20

CQ WW WPX - CW

May 26-27

HAMCOM - PLANO

June 8-9

ARRL JUNE VHF

June 9-10

ARRL Field Day

June 23-24

IARU HF

July 14-15

North American QSO Party, RTTY

July 21

CQ VHF CONTEST

July 21-22

North American QSO Party, CW

Aug 4

SHREVEPORT

HAMFEST

Aug 10-11

North American QSO Party, SSB

Aug 18

ARRL September VHF

Sept 8-9

Texas QSO Party

Sept 29-30

CQ WW DX - SSB

Oct 27-28

ARRL Sweepstakes - CW

Nov 3-4

ARRL Sweepstakes - SSB

Nov 17-19

CQ WW DX - CW

Nov 24-25

ARRL 10 Meter

Dec 8-9

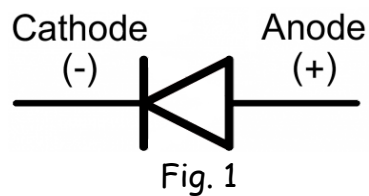
## More Diode Information

by

Thomas Atchison, W5TV

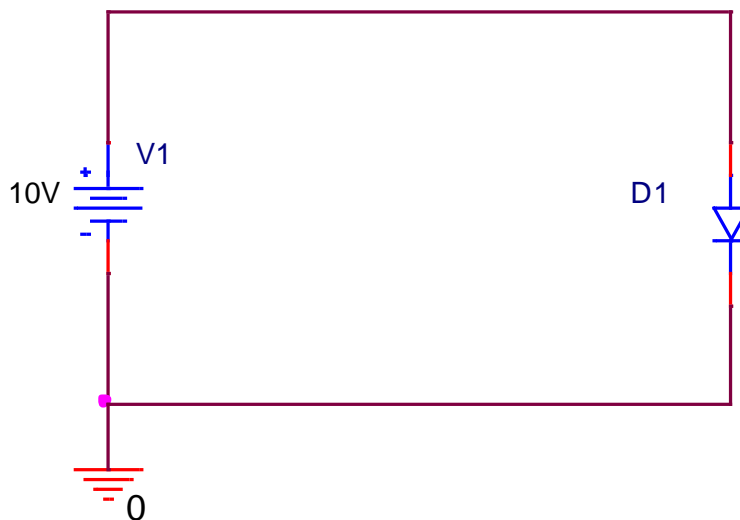
We talked about diodes in the last article so I thought I would take this opportunity to go into more detail about diodes.

The schematic notation for a diode is shown in Fig. 1.



As you see, one side is called the *Cathode* and other the *Anode*. If we connect the positive terminal of a battery to the anode and the negative terminal to the cathode as indicated by the (+) and (-) in Fig. 1 we say that we have **forward bias** and there will be current through the circuit. If we reverse these connections we say that we have **reverse bias** and there is no current flow in the circuit.

Now let's see what happens when we apply a variable DC voltage to a forward biased diode. We will analyze the circuit shown in Fig. 2.



We use OrCAD 16.6 and perform a DC Sweep Analysis on this circuit. We will vary the source voltage from 0 to 1.0 volt in steps of 0.05 volts and measure the current flowing through the diode (D1). A plot of forward bias voltage versus current through D1 is shown in Fig. 2.

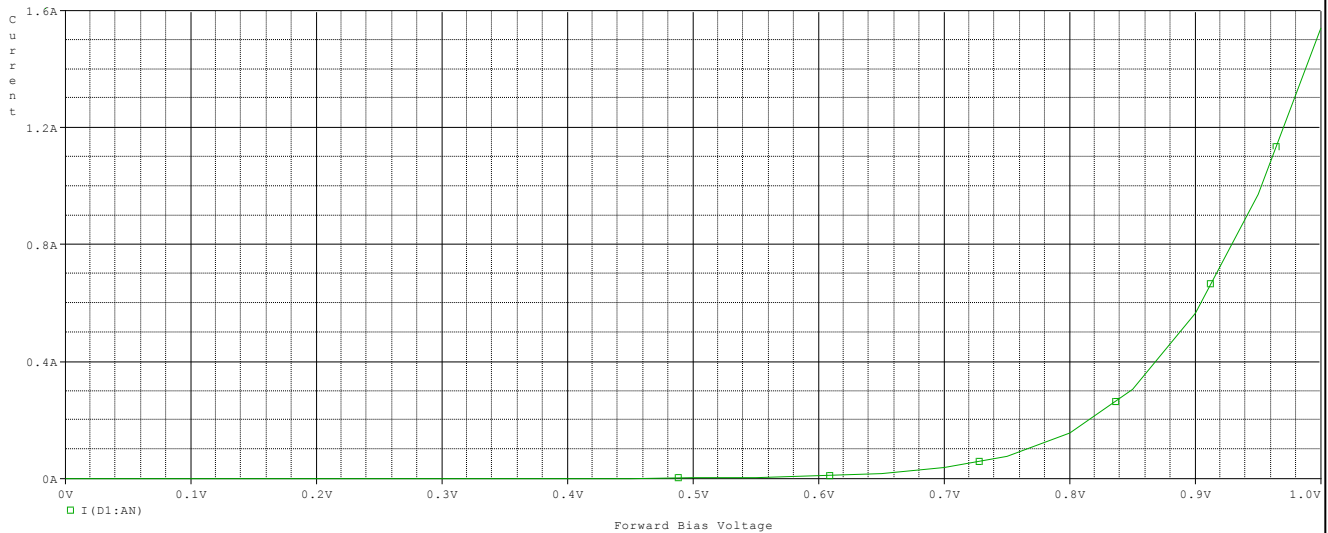


Fig. 2

The diode acts like a variable resistor. At voltages just above zero the resistance is large, but when the forward bias voltage reaches a threshold voltage, in this case about 0.5 V, the resistance becomes smaller and the diode begins to conduct. This behavior is due to the nature of the semiconductor material used to construct the diode. The current increases as the forward bias voltage increases. Since the diode has some internal resistance the increase in current causes the diode to become hotter. If we allow the diode to become too hot it will destroy itself. Different diodes have the ability to conduct different currents depending on their construction. Manufacturers of diodes provide specifications about how much forward current the diode can conduct before it destroys itself. One specification is an *average forward current* rating. This rating is the largest current you should allow through the diode. Some diodes will only handle a maximum average forward current of a few milliamps; however, other diodes may handle 10 amps or more. In some of the larger diodes you must provide a heat sink to dissipate the heat generated by the current in the diode.

Now suppose we provide reverse bias on our diode and increase the DC voltage from 0 V to 10 V as shown in Fig. 3.



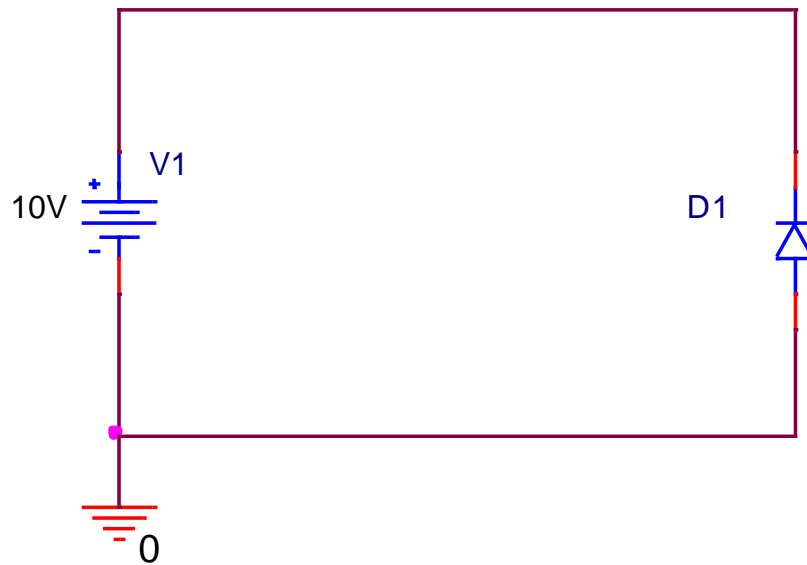


Fig. 3

Performing a simulation of this circuit provides the graph shown in Fig. 4.

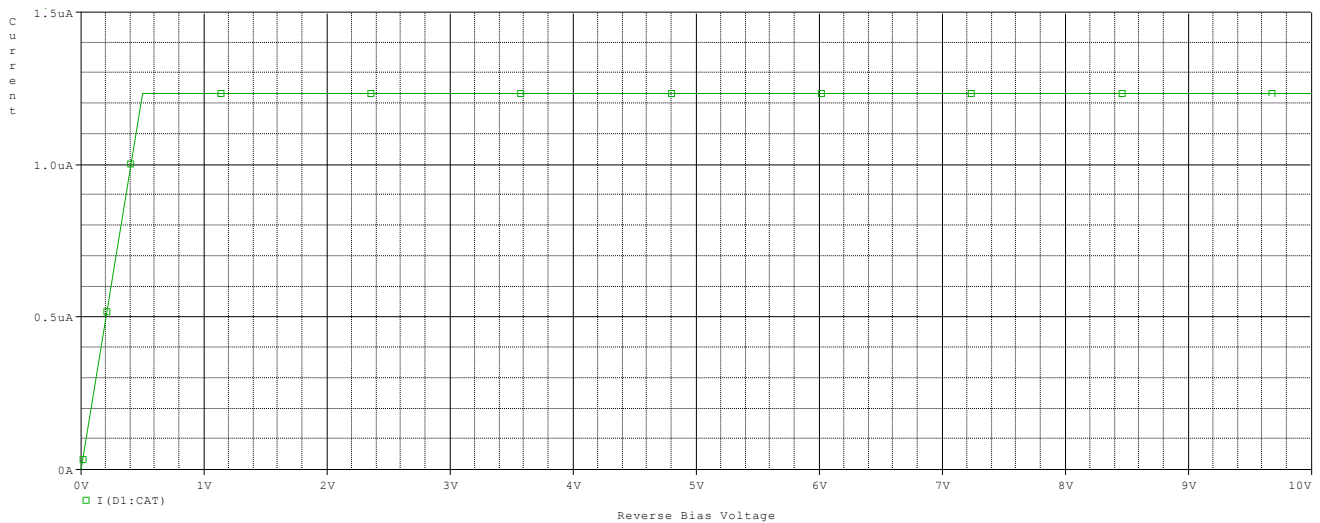


Fig. 4

We see a very small current of a few microamps flowing; however, this current will not increase as we increase the reverse bias voltage. Eventually, as we increase the voltage we will see a sudden increase in current. If this reverse current is not limited by the circuit it will quickly destroy the diode. The *peak inverse voltage* (PIV) rating of a diode specifies the highest reverse bias voltage that can be safely applied to a diode. This becomes very important when our source voltage is an AC voltage as in a power supply that is converting AC to DC. By the way, this process of converting AC to DC is called **rectification** and we will talk about such a process in the future.

MY TWO CENTS  
FOX WILLY ROGER

APRIL 2018

A few months ago I took advantage of a warm day to sit outside to get rid of the Cabin Fever I had collected, I watched my YC'S taking turns using an Ant bed for a bathroom, a few days later the Ants were gone. With that memory fresh at hand I devised a plan to experiment with my out of date and expired Meds. The tough part of this plan is choosing the better of the mounds. The plan is to start with Polyethylene Glycol, a laxative, and see what happens. If that fails, a dose of Carvedilol, a Heart med, and if all that fails I will open the suggestion box.

I was tending to the bird feeder when I happened to see TWT open an eye and look around, there's hope yet for the world.

As reported last NL about my freezer when it seemed to stop cooling, the Cool Pops I had stored there would not freeze, but the other contents were still hard and cold. I checked on the goods a week later, expecting to find a lot of food gone bad, everything was still frozen solid, all except the Cool Pops. Time to put the thinking cap on, the food that was in the box for a long time was AOK, the Cool Pops were still the same as when I put them in the freezer, but cold. A few days of hard thinking I came up with a theory of why this was happening. No circulation was the answer, did you come up with the same answer? I removed some items, rearranged others, and what do you know, frozen Cool Pops, there is Joy in Muddville tonight. With the circulation restored and the Cool Pops are now all eaten, go figure.

Well my yard flowers are in bloom as well as the Redbud tree and don't forget the Black berries too. If all the blackberry blooms are any indication, I will have a hell of a crop of berries. They will keep my eggs, cheese, onions and other things company in my omelets. Soon it will be pollen season, that yellow powder on everything, kind of looks like a snowfall.

I saw the first Hummingbird today, I put out some nectar in the Redbud tree, hope they come back.

I'm getting hungry for that second rabbit, I guess it's time to look for another recipe, it has to be just right for a great rabbit, maybe I can cook it for Easter. I don't know about you but I get tired of same old, same old.

What about this weather, cold in the morning and t-shirts in the afternoon, yes this is Texas, wait a bit and the weather will change again.

**QUESTION:**

Why is it that we have two names for the same thing, rugs or carpet, drapes or curtains?

What is the different between Greek Yogurt and regular Yogurt?

Why is it that Fords came out with the Model "T" and after that came out with the Model "A"?

**REMEMBER:**

Remember when 5-cent could purchase something?

Remember cars with starter buttons on the floorboard?

Remember when you could remember?

**COMENTARY:**

What the HELL is going on with the government?

Did you hear about a group of researchers has found "Micro plastic" particles in bottled drinking water? I understand it was a very high percent of the different brands that were tested had this happen to them. The Micro plastic was found to be of the same material that the bottle caps were made from.

And what about the government lowering the standards on the drinking water the city SELLS to the residents of the town? So now we have to purchase water purifiers and bottled drinking water that was found unsafe? Don't worry; the government will adjust the standards, double payments I think it's called? What about you, what do you think? Why is it to adjust the standards rather than doing it right from the get go?

Now I understand that the government said it was OK to remove the information on where our food was from, who produced it, now it's a shot in the dark as to what country it came from? Anyone remember Soilent Green? What's next, Fahrenheit 451? Who thinks 1984 is here, coming, or has been?

GUEST COLUMNIST

JACK TALDI

**THE CRAZY CAT GUY:**

The pride has three members, two Fluffies and Snow flake, and sometimes a third and fourth Fluffy and Tuff Guy will join the group. This makes the food go a lot further now, from twice a month to about five weeks. Every so often I catch an Opossum at my front door looking for leftovers.

If you live with a cat, you're lucky. If that number of cats is more, the luck is squared by that number. If whatever number of cats you live with are black, you are not only lucky, but protected from evil monsters, but no getting around it, you will gray faster and lose your mind much faster than you should when you live with cats. Case in point, on my way to bed I stopped to talk to one of my cats, I told her that it was bedtime and not to make a racket during the night, I talked for at least five minutes when I got no response I turned on the lights and found I was talking to a pair of shoes. This doesn't stop me from talking to shadows, one day it just might be my cats.

I see the buzzards now and then taking a break setting on my top antenna; I spotted a hawk the other day making a run through the hood.

TB was being a pest, as usual, with RP the target. TB'S game for that night was to find RP and pester her and run off to safety, wait and make another run at RP. This went on for about ten minutes when RP decided to find a spot on the bed and settle down for the night. TB wasn't ready for slowing down; in fact the fun was just getting started. This run started in the living room, down the hall TB came, not quite full speed, ran around the end and side of the bed and sprang onto the bed up and over RP almost clearing her RP was just in time to catch TB'S hind quarters causing TB to tumble almost off the bed, that concluded the circus for the night. And fun was had by all.

**DOGS HAVE MASTERS  
CATS HAVE SERVANTS**

**"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**  
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