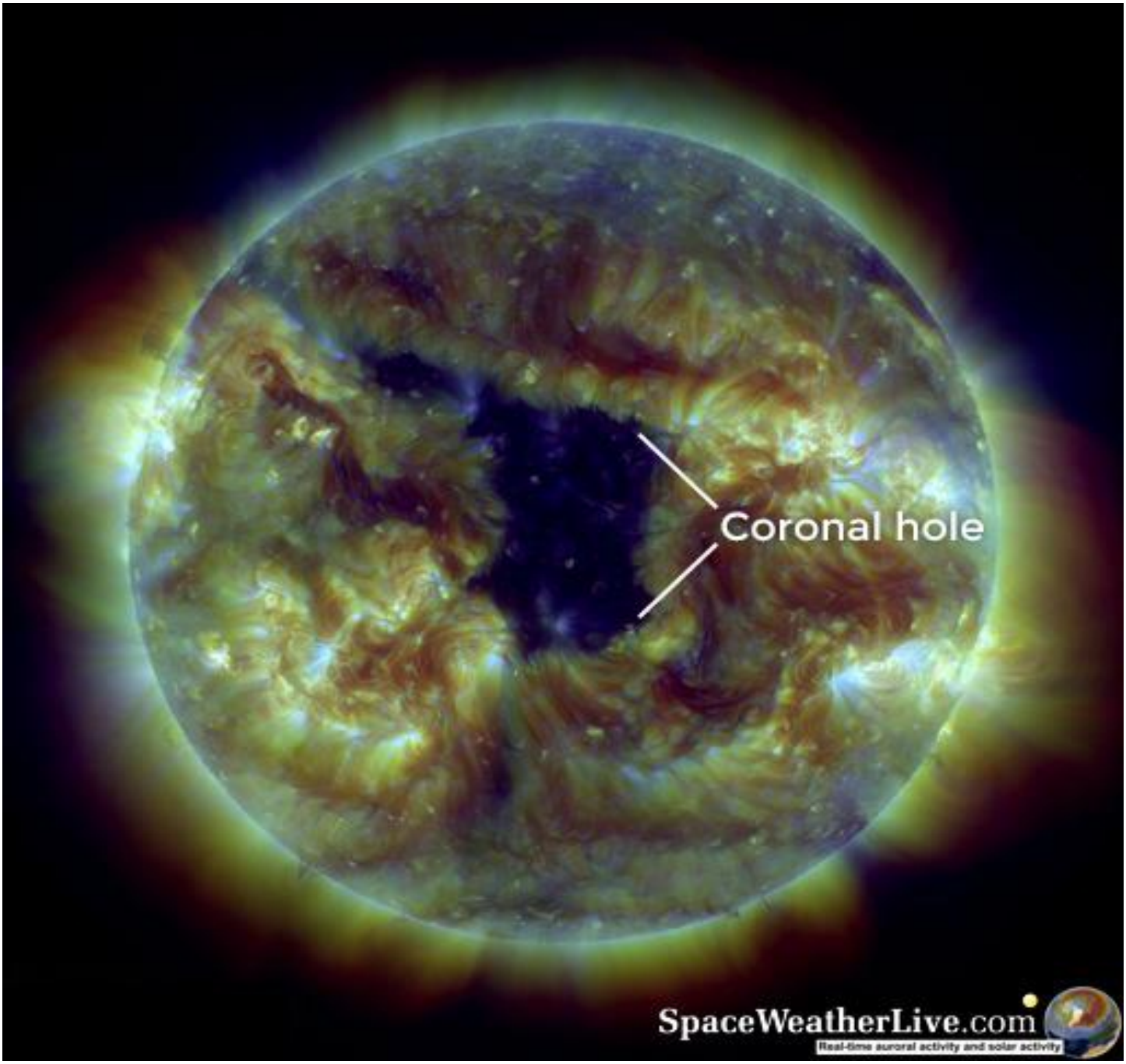
K9TRC is pleased to be affiliated with the American Radio Relay League (ARRL)

K9TRC –News

Ham News for Tipton County



The Tipton County Indiana Amateur Radio Club is an exempt organization under Section 501(c) (3) of the Internal Revenue Code.

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Ham News for Tipton County

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You are invited to attend the June meeting of the Tipton Indiana Amateur Radio Club which meets the second Saturday of each month . The next meeting is Saturday, June 8 , 2024, at 8:30 am, at the Jim Dandy Restaurant on West Jefferson Street in Tipton.

Executive Board meets the first Thursday of each month Also at Jim Dandy at 8:30 AM. Unless otherwise noted.

Officers: Louie Wolford (k9qcb), President, Paul Kennedy (kd9iqh) Vice President, Larry Crowder, Treasurer(k9lwc), Ron Adamson (WA9YJZ) Secretary, John Ankrom (kg9ja) Trustee

Standard Stuff:

The beginning of each net starts with an attendance of sorts of the local RACES/ARES membership. Have you wondered about RACES/ ARES and how to learn more? The ARRL has these courses if you are interested:

EC-001: Introduction to Emergency Communication

EC-016: Public Service and Emergency Communications Management for Radio Amateurs
PR-101: Public Relations 101 for Radio Amateurs

Look into them, they can be helpful.

If you think it is an emergency call 911. Don't wait, don't think it will pass. It's better to look a little silly than to become dead.

Notes from the Editor:

Indiana Section ARES® Nets

The Indiana Section ARES® HF net is held on 7.272 +/- during the summer months, every Sunday at 5 PM EDT.

Net Manager: Jim Moehring, KB9WWM. Email: servo300@aol.com

- ***Indiana ARES® HF Net Script***
- ***Indiana Section ARES® HF Net Log***

The Indiana ARES® HF Digital Net is held every Wednesday at 8:30 PM Eastern Time except the second Wednesday of the month on or about 3.583 MHz using Olivia 8/500.

Net Manager: Matthew Becdol, W9SOX

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ARE YOU UPGRADING YOUR LICENSE THIS YEAR?

Learn More

- EXAM SESSION

06/18/2024 | ANDERSON IN 46016-2238
Sponsor: Anderson Repeater Club
Location: Madison County EMA EOC
Time: 7:00 PM (Walk-ins allowed)
Learn More

- EXAM SESSION

07/16/2024 | ANDERSON IN 46016-2238
Sponsor: Anderson Repeater Club
Location: Madison County EMA EOC
Time: 7:00 PM (Walk-ins allowed)
Learn More

- EXAM SESSION

07/27/2024 | NOBLESVILLE IN 46060-1624
Sponsor: Central Indiana ARA/ HCRACES
Location: Sheriff's Training Room
Time: 10:30 AM (No Walk-ins / Register or Call ahead)
Learn More

- HAMFEST/CONVENTION
- 05/04/2024 - NORTH CENTRAL INDIANA HAMFEST
- **Location:** Marion, IN
  Type: ARRL Hamfest
  Sponsor: Cass, Grant, Howard, Miami Counties
  Website: http://www.NCIhamfest.com

- EXAM SESSION

08/20/2024 | ANDERSON IN 46016-2238
Sponsor: Anderson Repeater Club
Location: Madison County EMA EOC
Time: 7:00 PM (Walk-ins allowed)
Learn More

- EXAM SESSION

09/17/2024 | ANDERSON IN 46016-2238
Sponsor: Anderson Repeater Club
Location: Madison County EMA EOC
Time: 7:00 PM (Walk-ins allowed)
Learn More

- EXAM SESSION

10/15/2024 | ANDERSON IN 46016-2238
Sponsor: Anderson Repeater Club
Location: Madison County EMA EOC
Time: 7:00 PM (Walk-ins allowed)
Learn More

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- EXAM SESSION

  10/19/2024 | NOBLESVILLE IN 46060-1624

  Sponsor: Central Indiana ARA/ HCRACES
  Location: Sheriff's Training Room
  Time: 10:30 AM (No Walk-ins / Register or Call ahead)
  Learn More
- EXAM SESSION

  11/19/2024 | ANDERSON IN 46016-2238

  Sponsor: Anderson Repeater Club
  Location: Madison County EMA EOC
  Time: 7:00 PM (Walk-ins allowed)
  Learn More
- EXAM SESSION

  12/17/2024 | ANDERSON IN 46016-2238

  Sponsor: Anderson Repeater Club
  Location: Madison County EMA EOC
  Time: 7:00 PM (Walk-ins allowed)
  Learn More

Updaters Note: HamExam.org Amateur Radio Practice Exams

At: HamExam.org: Free Amateur Radio Practice Tests

Or for Technician Class: Ham Radio Technician Class Practice Test (updated 2020) (mometrix.com)

And General: Ham Radio General Class Practice Test (updated 2020) (mometrix.com)

OR: ON THE ARRL WEB SITE

Amateur Radio Websites that are supposed to be "Handy" From: H. Ward Silver: Part of the Ham Radio for Dummies Cheat Sheet.

ARRL- Many useful regulatory, educational, operating, and technical items and links

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eHam.net – News, articles, equipment swap and shop, product reviews, and mailing lists

Radiowave Propagation Center - Real-Time information on propagation and solar data

Space Weather Prediction Center - - Real-Time information on space weather and radio communications

TAPR (Information on Digital modes) - Information on Digital modes and software-defined radio (SDR)

AMSAT - Main site for information on amateur satellites

WA7BNM Contest Calendar - Contest calendar and log due dates

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YOTA (Youngsters on the Air) – World-wide group for student and young adult hams, based in Europe

DXMAPS.com - Collection of real time maps showing worldwide activity on any amateur band

DXSummit – Worldwide DX spotting network

You may or may not know the ARRL works with several agencies in the public service area. Many of these groups accept volunteers. If you have some free time and would like to be more active in the community here is a partial list of agencies that may need volunteer help.

- **American Red Cross+**
- **Association of Public-Safety Communications Officials-International (APCO-International)+**
- **Boy Scouts of America+**
- **Citizen Corps (Department of Homeland Security)+**
- **Civil Air Patrol (CAP)+**
- **Federal Emergency Management Agency (FEMA)+**
- **National Volunteer Organizations Active in Disaster (NVOAD)+**
- **REACT International Inc.+**
- **Salvation Army & SATERN+**
- **SKYWARN (National Weather Service)+**
- **Society of Broadcast Engineers (SBE)+**
- **United States Power Squadrons+**
- **Quarter Century Wireless Association, Inc.**

Copied from the ARRL website

10 Handy HAM Radio Websites:
ARRL, AC6V, DX Zone, QRZ.com, eHam.com, Radio wave Propagation Center, Space Weather Prediction Center, TAPR(Tuscon Amateur Packet Radio), AMSAT, WA7BNM Contest Calendar, YOTA (Youngsters On The Air)

New Stuff:

Keep in mind Kirchhoff's Voltage Law where the sum of the potential rises and drops around a closed loop is zero.

Voltage divider rule: Vx = Rx * V/ Rt.

So, the voltage across any resistor (or combination of series resistors) is equal to the value of that resistor multiplied by the potential difference across the series circuit and divided by the total resistance of the circuit.

Voltage is always the same across parallel resistors.

Conductance: The total conductance of a parallel circuit is equal to the sum of the conductance's of the branches. Conductance is the reciprocal of resistance

Conductance "G" = 1 / R, $G_t = G_1 + G_2 + G_3 \ldots .G_n$

And Gt = G1 + G2 + G3 + …Gn or 1/Rt = 1/R1 + 1/R2 + 1/R3 + … 1/Rn

I have forgotten something: Current Divider: I1 = (Rt / R1) * I

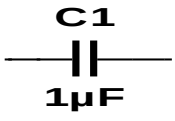
In parallel circuits…

And: I1 = *(R2* * I) / R1 + R2 Note where R1 and R2 are in each formula.

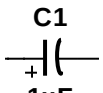
And: I2 = (*R1* * I) /(R1 + R2)

So, the last few papers we have encountered a new alphabet. We found DC, now we have found AC. We have R for resistor, I for current and E or V for voltage. A new abbreviation is now appropriate… ABC… Always Be Careful. The circuits I have drawn for this exercise have been run on 9 volts. Just a small battery, no big thing BUT electricity comes in different voltages, and currents. Some of these can be huge and if you are not the one who should be messing with those circuits… Don't. Let someone else with more experience do it. We are about to talk about Capacitors. Capacitors resist change, and while doing so they hold a charge. That charge can be lethal… be careful.

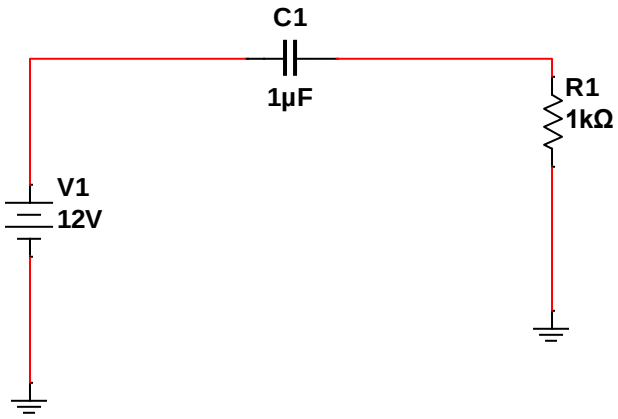
The schematic symbol for a capacitor looks like this:



It has an identifier, the C1 then a wire that goes into a plate which is across from another plate then another wire out. Then a label telling what the capacitance of this device is. This one is 1 micro-Farad. Most capacitors just have two flat plates which just tell us what it

is. Others like this one tell us that it has polarity. 

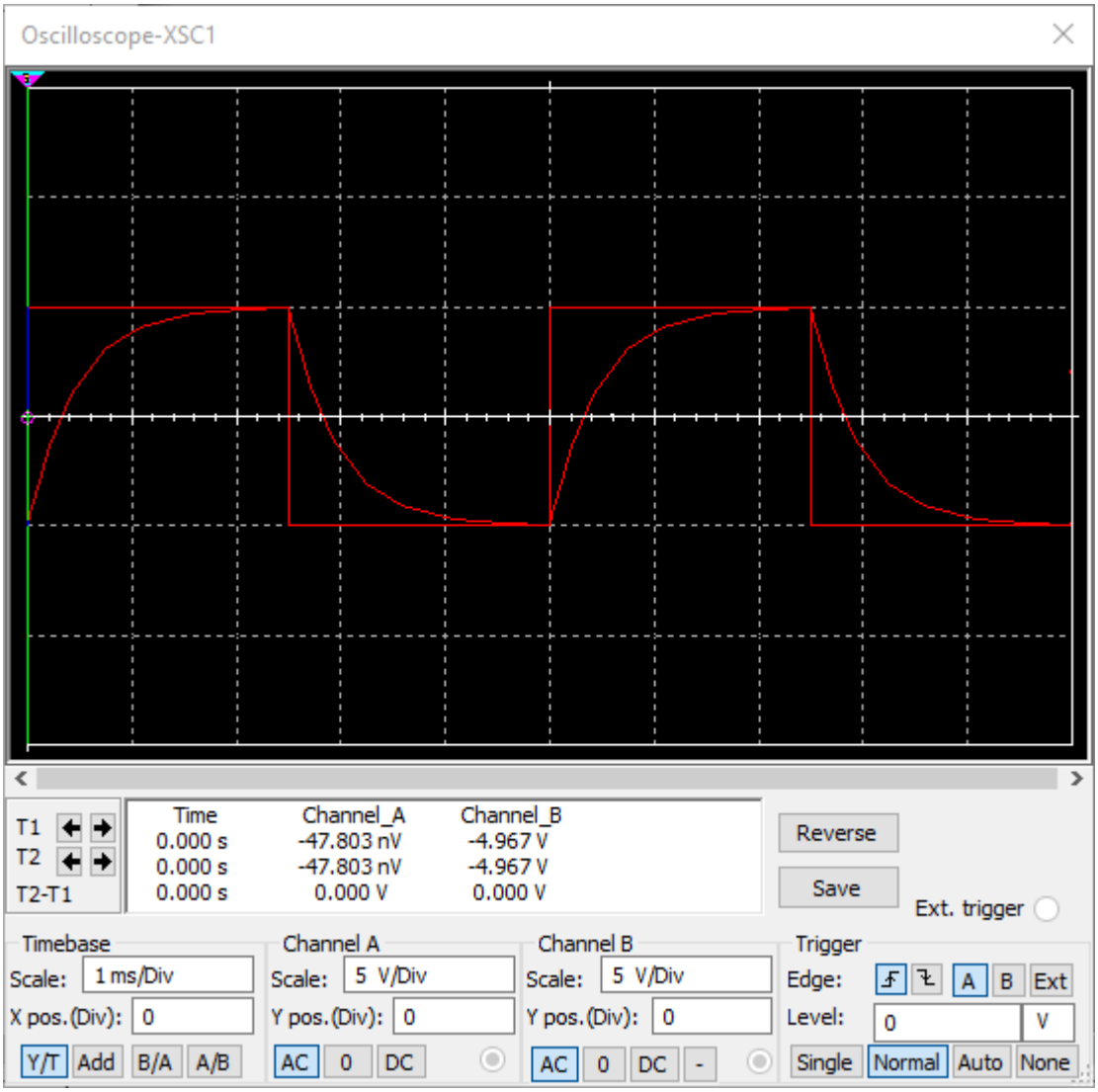
The little + sign with the curved plate is the giveaway. So how does this look in a circuit?



So, how do capacitors work? Look at the circuit above, C1 is sitting there with two plates and an empty area in the middle. The empty area is usually filled with a dielectric, essentially an insulator. Then from the battery, out the top goes 12 volts in + form. Out the bottom of the battery goes 12 volts in – form. The – form is electrons and they all think they are escaping from the battery and they go around through the resistor and start accumulating on the plate on the right side of the capacitor. This accumulation of – charge on the right side of the capacitor pushes the – charges away from the plate on the left side of the capacitor. The more – charges on the right keeps pushing the – charges away from the left side until all of the – charges in the battery that can move to the capacitor have moved. Now, the capacitor is charged. Unfortunately, this is a DC circuit and while a DC circuit can charge a capacitor, it can't do anything else. The only way to discharge a capacitor in a DC circuit is to install a switch in line somewhere. Now keep in mind AC and we will talk about this later.

The chart below shows the charging of a capacitor. Yes, the red lines really mean something. From the left, the curved red line shows the charging capacitor, then the curving red line going down is the discharge of said capacitor. If you get in to this, it takes 5 time constants to charge.

It's a square wave being shown.



So, how does one calculate capacitance in a parallel circuit? Ct = C1 + C2 + C3 ... + Cn
And in a series circuit? 1 / Ct = 1/C1 + 1/C2 + 1/Cn, or
1/ 1/C1 + 1/C2 + 1/ C3 + 1/ Cn...

Lastly:

"To earn a lot of money you must know something. If you wait for someone to teach you everything, you are in line with everyone else. Amateur Radio is a way to self-learn calling on "Elmer's" when needed. This increases your skills, technical knowledge and abilities. You are in charge and you are ahead of the competition."

DO YOU HAVE A PROJECT? TAKE A PHOTO AND FORWARD TO ED, WITH A DESCRIPTION.

Notes from the Editor:

Are you a weather, time, data kind of person? Try this: www.timeanddate.com

If you are interested in the FCC requirement for RF Exposure, the Lake Washington Ham Club.org/resources has an RF exposure calculator online.

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ONLINE COURSES VIA THE ARRL:

FIND AN AMATEUR RADIO LICENSE EXAM IN OUR AREA:

???? Due to the Coronavirus outbreak, please verify with your VE team that the exam session is being held. ????

- EXAM SESSIONS

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UPDATERS NOTE: HAMEXAM.ORG AMATEUR RADIO PRACTICE EXAMS

At: HamExam.org: Free Amateur Radio Practice Tests

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DXSummit – Worldwide DX spotting network

The schematic from May was a radio field strength indicator by Sonja Herdon July 2022.

“Everyone thinks of changing the world, but no one thinks of changing himself.”