

K9TRC –News:

Well, I know I am not supposed to do this but I am doing it anyway. I have three Ham Radio License manuals, each out of date. I like to wonder about circuits and how to put these things together so I look through the manuals. Yes, I find some descriptions of how to solve this or that particular problem that will be on that particular test but I see nothing about building a circuit. Yes, I can find schematics that show the complete thing and maybe that's it. Maybe I am just supposed to follow along and put this or that part in this or that space and go on. But I am not seeing it. So, starting with this issue of this newsletter I am going to learn about circuits. You can throw this away if you want.

Ham News for Tipton County

You are invited to attend the March meeting of the Tipton Indiana Amateur Radio Club which meets the second Saturday of each month . The next meeting is Saturday, March 9 , 2024, at 8:30 am, at the Jim Dandy Restaurant on West Jefferson Street in Tipton.

Executive Board meets the first Friday 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

Note: The annual Skywarn presentation is sponsored by the Kokomo Amateur Radio club and will be held in the Eastern High School Performing Arts Center on campus in Greentown on March 23 at 2 PM.

The beginning of each net starts with an attendance of sorts of the local RACES/ARES membership. Shortly after this our regular “Net Night” begins. This of course is every Monday evening at 8PM. 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:

Oh, Oh! The circuit displayed in the February Newsletter was a Simple receiver and I found it on the Internet. (credit to them)

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

ARE YOU UPGRADING YOUR LICENSE THIS YEAR?

- EXAM SESSION

02/20/2024 | [ANDERSON IN 46016-2238](#)

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

- EXAM SESSION

03/19/2024 | [ANDERSON IN 46016-2238](#)

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

- EXAM SESSION

04/16/2024 | [ANDERSON IN 46016-2238](#)

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

- EXAM SESSION

04/20/2024 | [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

05/21/2024 | [ANDERSON IN 46016-2238](#)

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

- EXAM SESSION

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](#)

- 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](#)

The North Central Indiana Hamfest will be held Saturday May 4, 2024 from 9AM to 2 PM (est) at Harts's Celebration Center, 3031 E 450 N, Marion, IN, talk in 146.790-(141.3).

This information taken from the Kokomo Amateur Radio Club Website.

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

AC6V and DX Zone – General-interest websites with many links on all phases of Ham Radio

QRZ.com - Callsign lookup service and general-interest ham radio portal

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

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)+**

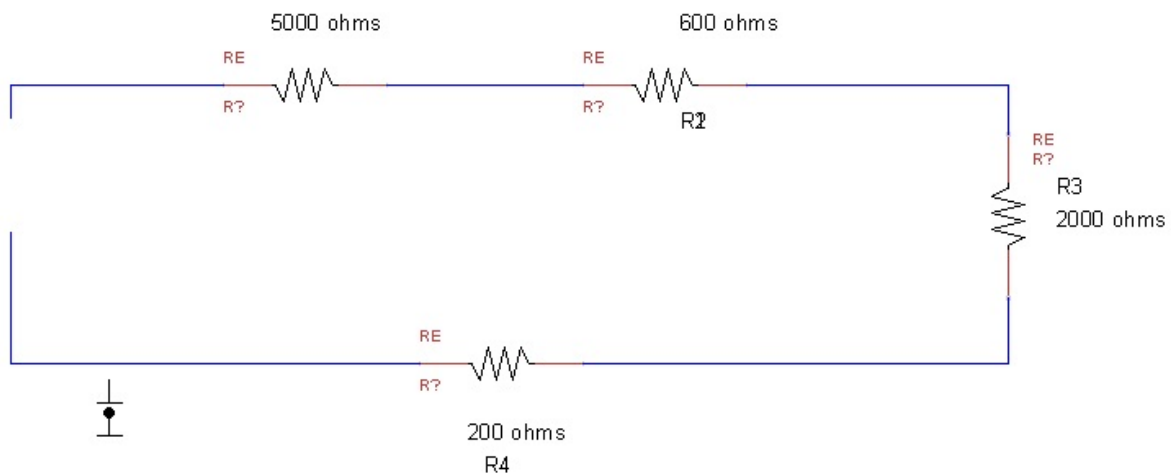
- Society of Broadcast Engineers (SBE)+
- United States Power Squadrons+
- Quarter Century Wireless Association, Inc.

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)

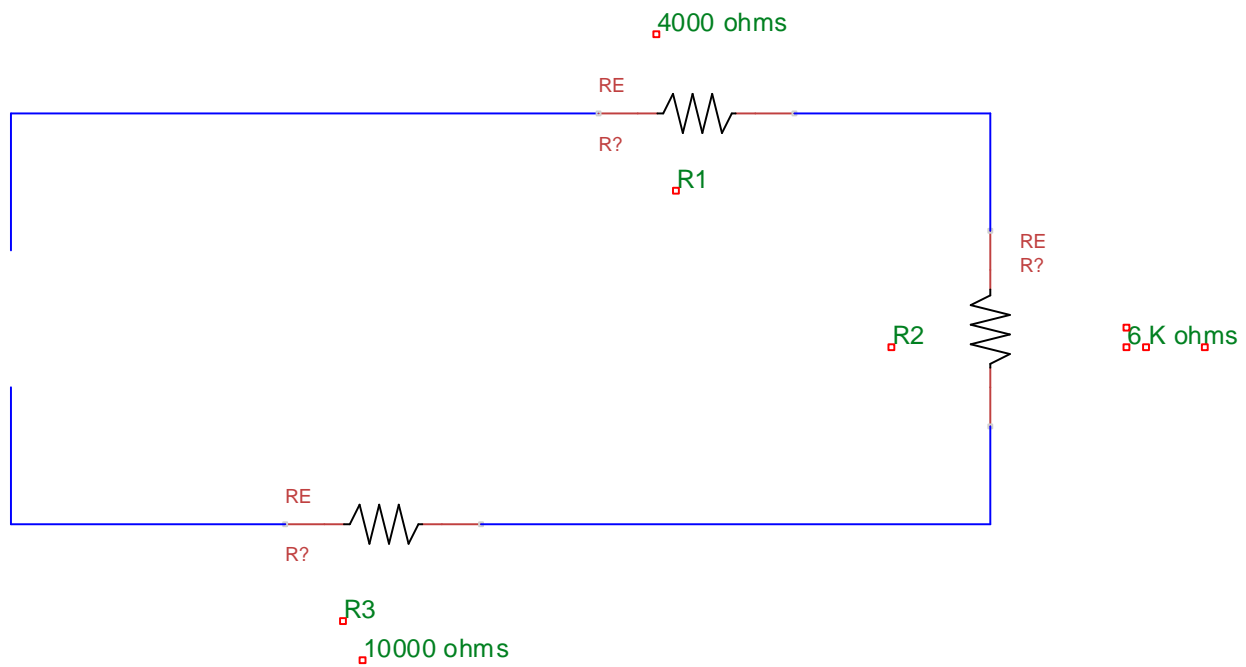
Me being a simple guy have decided to start with simple circuits so DC is where I start.



Resistance Total in a DC circuit is $R1 + R2 + R3 + R4$

$$5000 + 600 + 2000 + 200 = 7800 \text{ ohms}$$

RESISTOR total IN A SERIES IS $R1 + R2 + R3 + R4 + R\ldots = RT$. Current is a constant in series circuits.



$$R_t = R_1 + R_2 + R_3$$

$$R_t = 4000 + 6000 + 10000$$

$$R_t = 20000 \text{ ohms}$$

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: $V_x = R_x * V / R_t$.

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.

Parallel circuits: R1 500 ohms

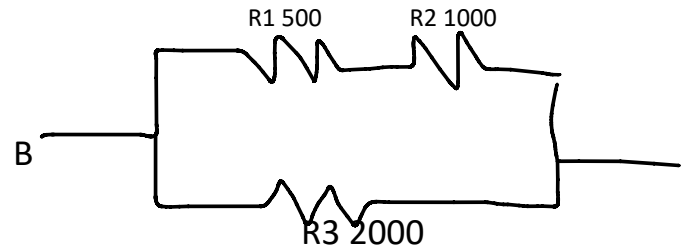


$$R_t = (R_1 * R_2) / R_1 + R_2$$

$$R_t = 500 * 2000 / 500 + 2000$$

$$R_t = 1000000 / 2500$$

$$R_t = 400 \text{ ohms}$$



$$\text{First: } R_1 + R_2 = 1500 \text{ (series)}$$

$$\text{Then: } (1500 * 2000) / 1500 + 2000$$

$$R_t = 3000000 / 3500$$

$$R_t = \sim 857 \text{ ohms}$$

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

$$\text{Conductance "G"} = 1 / R, G_t = G_1 + G_2 + G_3 \dots G_n$$

$$\text{And } G_t = G_1 + G_2 + G_3 + \dots G_n \text{ or } 1/R_t = 1/R_1 + 1/R_2 + 1/R_3 + \dots 1/R_n$$

Next month parallel circuits.

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."

