

# The VALLEY HAM NEWS

The Voice of the Yuba Sutter Amateur Radio Club  
A California Non-profit Organization

E-Mail: [ysarc@cwnet.com](mailto:ysarc@cwnet.com)

Y-S ARC Web Page: <http://users.cwnet.com/ysarc/>

Y-S ARES Web Page: <http://www.ysares.org>

P.O. Box 1169

Yuba City, California 95992

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Editor: Curtis R Sylvester-José, KF6VFP  
12472 Krosens Road, Marysville, CA 95901  
Telephone: 530-743-3003  
E-Mail: [CurtJose@aol.com](mailto:CurtJose@aol.com)

Webmaster: Herb Puckett, W6HBU  
712 King Street, Yuba City, CA 95991  
Telephone: 530-674-3648  
E-Mail: [firtree1@pacbell.com](mailto:firtree1@pacbell.com)

## CLUB OFFICERS

**President:** Mike Colvin, W6CUJ  
**Vice President:** Art Nelson, W6ARN  
**Secretary/Treasurer:** Clara Ansley,  
KC6JPP

## BOARD OF DIRECTORS

Herb Puckett, W6HBU  
Russ Decker, KB6YAF  
Lee Sheffield, KC6MCI  
Curtis Sylvester-José, KF6VFP  
Thomas (Robby) Robinson, N6PGK  
Marvin Lemburg, KE6JNT

## REPEATER TRUSTEE

Dave Gartner, WD6AXM

## NEXT BOARD MEETING

The next Board Meeting will be at Kalico Kitchen in Live Oak on Jun 21 at 9:30 a.m. Come join us for breakfast at 8:30 a.m. before the meeting. Board members please attend so we have a quorum to vote on a swap meet allocation and dates.

Bring your suggestions, gripes and offers to help as well as your appetite.

## UPCOMING EVENTS

June 4, 7:00 p.m. at Herb's (W6HBU)  
Home – Bike Around the Buttes Critique.  
June 18, 7:00 p.m. at Yuba County  
Library – General Cub Meeting.  
June 21, 8:30 a.m. at Kalico Kitchen in

Live Oak – Breakfast and Board Meeting

June 28 and 29 – Field Day.

July 10 – VE Testing Session.

July 26 – Club Barbeque at Pete Visalli's in Dobbins.

Monday nights at 7:00 p.m. – weekly net with swap shop and help sessions.

Second Wednesday of each month at 7:00 p.m. - the ARRL Sacramento Valley Section (UHF) Net.

Thursday nights at 7:00 p.m. – weekly ARES net.

June – CDF ARES Simulated Emergency Test sometime this month with Butte and Nevada Counties.

## THE SMOKE THEORY OF ELECTRICAL CIRCUITS

Electrical Theory by Joseph Lucas

Positive ground depends upon proper circuit functioning, the transmission of negative ions by retention of the visible spectral manifestation known as "smoke". Smoke is the thing that makes electrical circuits work; we know this to be true because every time one lets the smoke out of the electrical system, it stops working. This can be verified repeatedly through empirical testing.

When, for example, the smoke escapes from an electrical component (i.e., say, a Lucas voltage regulator), it will be observed

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that the component stops working. The function of the wire harness is to carry the smoke from one device to another; when the wire harness "springs a leak", and lets all the smoke out of the system, nothing works afterwards. Starter motors were frowned upon in British Automobiles for some time, largely because they consume large quantities of smoke, requiring very large wires.

It has been noted that Lucas components are possibly more prone to electrical leakage than Bosch or generic Japanese electrics. Experts point out that this is because Lucas is British and all things British leak. British engines leak oil, shock absorbers, hydraulic forks and disk brakes leak fluid, British tyres leak air and the British defense establishment leaks secrets...so, naturally, British electrics leak smoke.

Author Unknown

## Subject: SMOKE

When wires smoke, how come the smoke is not the same color as the wire?

This is not completely true. When the smoke is in the wire, it is under pressure (called voltage). The pressure difference causes the color to change from the normal color we are used to. Not unlike the blood in our veins and arteries changing color due to the oxygen content. When the smoke escapes the wire and is exposed to air, the pressure is released, and the color reverts back to what we commonly recognize as smoke. The wire then changes to the color of the smoke that escaped.

I hope this helps you understand.

I would only question the last sentence of that description. It has been my experience that the wire turns a color directly opposite of the smoke.

Not always true, I think it must depend on the composition of the smoke in question.

I should have made it a little clearer; the color the wire becomes, is directly proportional to the escape velocity of the smoke. Higher velocities generate higher heat. This heat

tends to burn the wire and affect the coloring. The statement was meant to be a generalization, indicating the fact that the color of the wire does in fact change. Sorry for the miscommunication.

I was speaking of electrical smoke which is generally white. The spent smoke casing generally assumes a color somewhat near black after the smoke leaves.

I can't stand it anymore! If, as you say, light bulbs suck up darkness and convert it to smoke which is transmitted (via wire) to a power source for recycling...why do car batteries go dead when lights are left on? Do car batteries (and flashlight batteries for that matter) have a limited amount of storage capability? Is it like a hard drive that gets so full that you have to double-space and then lose all data?

Now you're getting it.....

I thought you guys were smarter than this. Of course the battery stores the smoke. In fact it can store so much smoke that if you open the top and light a match, the resulting explosion can do serious damage. I'm sure you are aware that usually where there's smoke there's fire. If you connect the battery to a charger, the smoke is then returned to the wire (Remember, a light bulb wont work unless it is connected to a wire system) for the utility companies to use. Your hard drive analogy is a very good example.

Our hardware guys might be onto something in their quest for superior wiring. I have noticed the unique method of series/parallel wiring the power strips on our systems seems to prevent the smoke from getting out of the wires. A "Smoke Loop" of sorts. In the case of the "smoked" workstation recently, you should notice that this was a conventional single power strip installation.

Since color is perceived by the cone shaped receptors in our eyes, and cones require more light than their rod shaped counterparts. Is the sky blue at night?

At night the process including contraction of the pupil is visual purple by

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which the eye adapts to conditions of increased illumination when facing 300 candle power reflecting devices.

Since there is a spectrum of light that we as humans cannot see, I support the theory that everything is going up in smoke, we just can't see it. This may explain why the neighbors dog barks for no apparent reason.

I think your basic understanding of smoke systems is remarkable. However I find a flaw with your theory. The battery is a reusable storage device for smoke. therefore, one would assume that some sort of one way valve (we can call it a diode) should be needed to prevent pressure flooding back into the system while at rest. Unlike the A/C system, the smoke system is collecting darkness at the headlights and converting it to smoke. This causes the system to fill up. The battery can contain much higher pressures and volumes than the wires. If this pressure exceeds the capacity of the wire, it will cause a rupture as you described. The rupture can be controlled by a sacrificial device known as a fuse. But this still doesn't eliminate the problem. Perhaps a two way valve (zener diode) is used to allow a small amount of pressure to return to the system, and partially equalize. I find this theory unlikely though, due to the increase in the force required to start the pump (which is now under pressure) working again...

The smoke continues circulating through the system, due to the pressure differential in the battery (smoke pressure/vacuum reservoir). When the reservoir becomes depleted, the pressure simply equalizes everywhere in the system (similar to an A/C system when it's turned off) and stuff just wont work. Notice the relations: Work (W) = Force (F) x Distance (D); Force (F) = total difference in pressure (Dp) x Area (A). Therefore, the work done in a pressure system is:  $Dp \times A \times D$ . If the pressure differential (Dp) is reduced to zero then  $W = 0 \times A \times D = 0$ .

The smoke only escapes the wires when a path is created between the pressure

differential areas (@ either the reservoir or the pump) that has too little restriction. When this happens, the smoke travels through the wires so fast that the friction between the smoke and the outer walls of the wiring heats the wires until they rupture. The smoke continues to escape until its pressure is equalized with the atmosphere, or until the conduit that provides the path between pressure areas is severed. When this happens, the sudden drop in pressure allows the wires to "collapse" slightly and, being so hot, as the edges of the ruptures and severed ends touch, the material becomes fused, sealing the system and retaining the remaining smoke.

Don't forget, when the system is at rest, all the valves, (switches and relays) are closed, keeping the pressure areas separated. When restarting the pump, as long as everything is OK, the smoke pressure is equal on both sides of the pump and there is no net force on the pump when it begins operating again. Also, within the pump there are pressure/volume actuated one-way valves with restrictors built in, arranged in such a way that they keep excess smoke volume recirculating through an integral smoke loop, which maintains the pressure within manageable limits.

The excess smoke, created by the light/smoke converters (headlights and other darkness absorbing devices), is changed back to darkness and dissipated in small unit concentrations so its dark effect is not locally observed. The smoke pump impeller (stator), converts smoke into magnetic flux which does work on the engine. Some of the excess work energy is dissipated through the cooling system and exhaust in the form of heat, while the remaining work energy is converted back to smoke and distributed evenly in small concentrations as you drive. This maintains the total quantity of smoke in the system at an average that does not change over time.

The above was received in an email from Russ Decker (KB6YAF)

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## BOARD MEETING MINUTES MAY 10, 2003

Those present enjoyed breakfast at Coco's, prior to the Board Meeting.

Present were: President: Mike Colvin-W6CUJ, V. President: Art Nelson-W6ARN and Secretary-Treasurer: Clara Ansley- KC6JPP. Board Members: Herb Puckett-W6HBU, Curtis Sylvester-Jose-KF6VFP, Paul Johnson-N6XVL, Tricia Wilkerson-KG6PNC, Leonard Wilkerson-KG6PND, Michael Hardesty-KG6PNG, Bob McClard-WA6OWH and Dan Flores-WB6PKB.

The meeting was called to order by President Mike at 9:15 a.m. Minutes of the April 19 meeting were approved, as was the Treasurer's Report.

Treasurer's Report: Checking Balance; April 19: \$2,420.93. Receipts Deposited; Dues: WA6OWH/WA6RLZ: \$22, VE: \$16, Change: \$11; Total: \$57. Total: \$2,477.93. Bills: Total: \$192.95. Checking Balance: \$2,284.98. Less Repeater Balance: \$660 and VE Balance: \$100.56. Club Balance: \$1,524.42. Clara Ansley, Treasurer.

President Mike gave the ARES Report. There will be 3 training sessions, which ARES members will either need to attend or make arrangements to borrow the video lessons to learn at home. The first session, "Introduction to Disasters" will be held on May 14 at the Red Cross.

It was reported that we will have a "Goddess" station available during the Field Day. As I understand it, this is for non-hams to use, with the assistance of a licensed ham to acquaint them with this form of communication. We have received our Field Day packet from ARRL. Neither of our Co-Chairmen for this event was present.

It was announced that Teeje Jamison, one of our Field Day Co-Chairs was involved in an accident which demolished his pickup, but thankfully he was not seriously injured, but was shaken up. Teeje, you had better thank

that Angel that was riding on your shoulder.

We will have a meeting on June 4th at 7:00 p.m at the home of Herb Puckett, to critique the Bike Around the Buttes. There are a couple of items that need to be improved. We want to correct anything we are not doing quite right, so that we will not continue doing them.

Herb reported that we had two participants, one from Incline Village, Nevada and Pittsburg, California take the code test, which each one passed; then one passed the Technician exam and the other the General. Herb stated that he would not be available for the VE session in July, but that he would get the new Technician exam prepared before he takes off.

The monthly Club meeting will be changed to the 3rd Wednesday at the Yuba County Library. Secretary Clara Ansley stated that the President needs to get someone take minutes at these meetings, so they can be presented to the Board, so they will know what is taking place.. Secretary Clara Ansley is unable to attend meetings on a weekday evening because of her other commitments.

It was reported by President Mike that we could hold our Hamfest on the parking lot of the Red Cross facility; and if it should rain, we could use the auditorium. Loud speakers are available, and we could use the kitchen in which to prepare and serve a breakfast. This will be brought before the next Board Meeting, as there was not a quorum at this meeting to make any decisions.

The next Board Meeting will be held at the Kalico Kitchen in Live Oak on June 21st at 8:30 a.m. Hope to see a lot of you there.

Being no further business, the meeting was closed at 10:09 a.m.

Submitted by:

Clara Ansley (KC6JPP)  
Secretary/Treasurer