

Fire Antenna

By: *Vladimir Polaykov, RA3AAE*

Credit Line: www.qrp.ru

Once Friday's day I was busy at my cottage with some deals to do. My backyard was pile upped with dry logs and branches. I made a fire in an old rim from a truck. Looking at the smoke going to the night sky, I remembered [1], about smoke that could improve receiving. I had a multimeter M830B and detector receiver described at [2]. So, I decided to make an experiment. I suppose that smoke above fire should collect current from atmosphere, like a broom antenna [3], so, smoke should work like antenna.

The first experiment was simple – I put on the fire a rusty hoop with wire connected to it. The wire was connected to one terminal of the multimeter, the second terminal was connected to the ground. Voltage flows from + 1.0 to - 0.2- V. I put the hoop on the ground- voltage at multimeter became + 0.3- V. I put the hoop to the fire- voltage at multimeter became + 0.1-V. I decided stopped the experiment because I believe the voltage may appear due electro- chemical reaction fire- ground- hoop.

In the next experiment I put an old metal grating above the fire. Multimeter was bridged to the grating and the ground. Current from the grating was very unstable. Depend on the wind and fire it often changed polarity, sometimes it was disappeared, maxima current was 1- 2 nanoAmperes.

I tested the grating like antenna. Without fire it was possible to provide a weak reception of a nearest MW broadcasting from MAYAK (<http://www.radiomayak.ru/>), 549-kHz. I have got detected voltage near 150- milliVolt. After the fire was started, the voltage risen up to 170- 180- milliVolt, then, after fire took full strength, the voltage drop to 100 and ever 75 – milliVolts with strong fluctuations.

This experiment proved influence fire to radio-reception, but in the other side. The more fire is the bad reception we have. However, thought about the experiment made me to decision that all were right. The maxima of ionization are inside of the fire. But fire lay on the ground. So the fire just shorts the antenna to the ground! To obtain benefits from the fire it required to insulate the fire from the ground.

Next day I found of three empty bottles made from a transparent glass. The bottles were installed on two bricks.

<http://www.antentop.org/>

On the bottles I put the rim for fire. The rim had wire connected to it. (If you want to repeat my experiment- be careful! The design is not absolutely stable...) Like a ground I have used an iron sheet laying on the ground near the fire. **Figure 1** shows the schematic of the Fire Antenna and Detector Receiver

The experiment was made 5 times at different days. Were received very stable data. Current was zero at no fire. When the fire was burning, the current slowly increased up to + 7 nano Amperes (at fire shown at **Picture 1**). Ever weak wind destroys the ionic column and decreased the current from the fire.



Picture 1 Typical Fire

I tested the fire antenna for radio- reception. No significant improvement at reception of a strong station. Broadcasting MW station MAYAK showed stable 110- milliVolt without fire. At fire there were fluctuations from 80- to 150- milliVolt. At headphones it looks like HF- reception with fading. It was found that the fire could change tuning of the detector receiver.

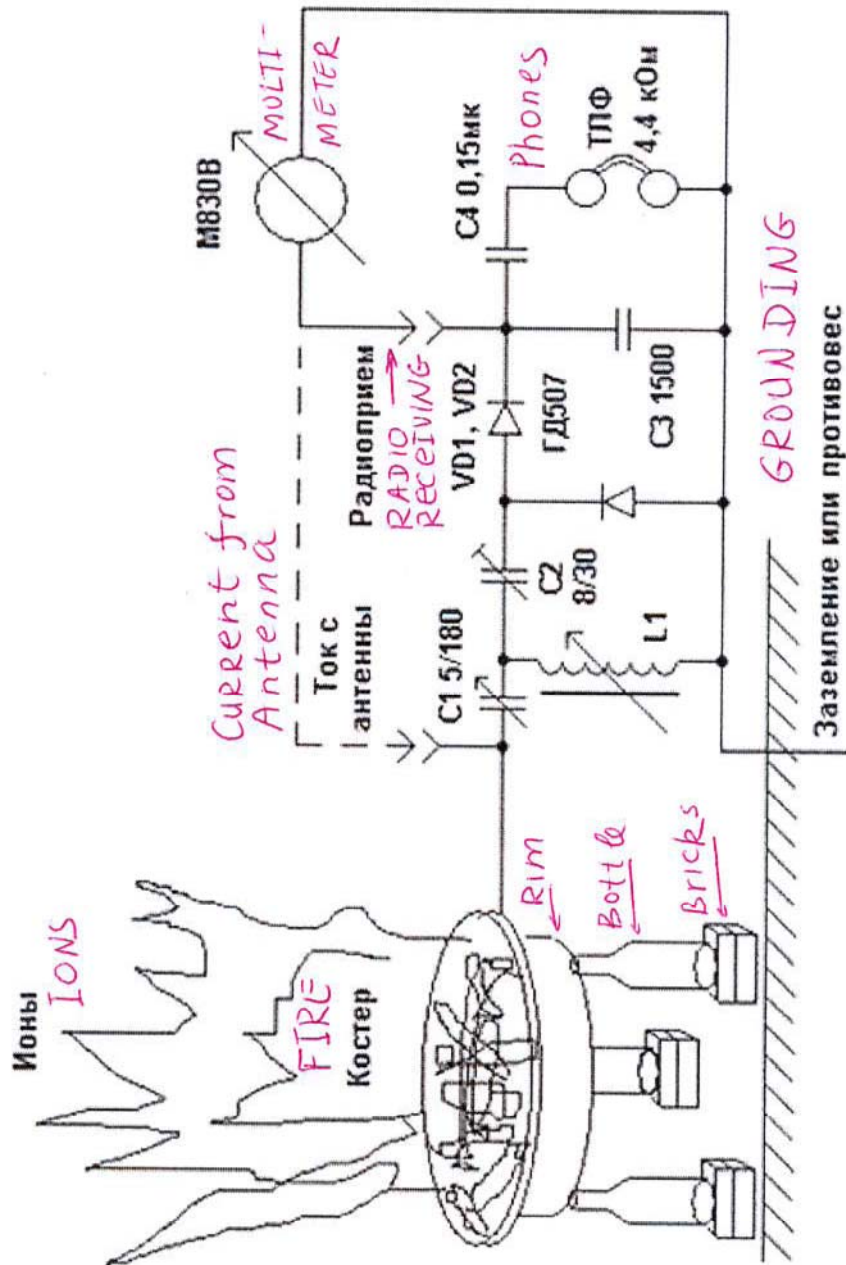


Figure 1 Schematic of the Fire Antenna and Detector Receiver

However, it was visa versa for a weak broadcasting radio- station. At my area I received a weak MW station PODMOSKOVIE, 846- kHz. Without fire it was only 15- 17 milliVolt from the station. After fire was burned the voltage increased up to 50- milliVolt. Fire was burned down the voltage drop to 15- milliVolt...

So, the experimenters proved that fire antenna gives effect at small signals, when RF-current is near the border of the atmospheric current that antenna may take from the atmosphere.

The experimenters are not finished. It should be tested receivers more sensitivity the simple detector ones. Different frequencies should be tested. Only after that we can say something about the Miracle Fire Antenna.

References

1. <http://www.antentop.org/009/ra3aae009.htm>
2. Receiving: Simple AM Receivers: Moscow, DMK-Press, 2001 (pp: 83.. 85)
3. http://www.antentop.org/010/ra3aae_010.htm