

# ANTENTOP

ANTENTOP 02 2003 # 003

ANTENTOP is **FREE** e-magazine devoted to **ANTENnas**

**Theory,  
Operation, and  
Practice**

*Edited by hams for hams*

**60 GHz in 1890s!**

**In the Issue:**

**Practical design of HF and  
VHF Antennas!**

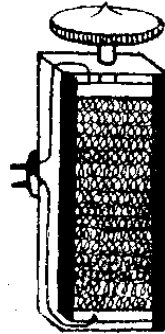
**Antennas Theory!**

**Tesla's Mysteries!**

**Histories of Early Radio!**

**And More....**

**Bottle Antenna**



The Spiral-spring Receiver.

**EDITORIAL:**

Well, my friends, new ANTENTOP – 02 -2003 come in! ANTENTOP is just authors' opinions in the world of amateur radio. I do not correct and re-edit your articles, the articles are printed "as is". A little note, I am not a native English, so, of course, there are some sentence and grammatical mistakes there... Please, be indulgent! (continued on next page)

Now ANTENTOP is sponsored by microHAM, please, visit to microHAM's site at <http://www.microham.com/>

I believe, you find many interesting there!

**Thanks to our authors:**

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And others.....**



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ANTENTOP 02 –2003 contains huge antenna articles, and several historical articles. Hope, you will like it. Our pages opened for all amateurs, so, you are welcome always, or as a reader or as a writer.

**73! Igor Grigorov, RK3ZK**

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**Welcome to ANTENTOP, FREE e - magazine!**

**ANTENTOP** is **FREE e- magazine**, made in **PDF**, devoted to antennas and amateur radio. Everyone may share his experience with others hams on the pages. Your opinions and articles are published without any changes, as I know, every your word has the mean.

Every issue of ANTENTOP is going to have 100 pages and this one will be paste in whole on the site. Preview's files will be removed in this case. I do not know what a term for one issue will need, may be 2-3 month or so. As I have counted, a whole issue of ANTENTOP will hold nearly 10 - 20 MB .

**A little note**, I am not a native English, so, of course, there are some sentence and grammatical mistakes there... Please, be indulgent!

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**Preview:** Some articles from "cooking" issue will be pasted for preview on this site, others no. Because, as I think, it must be something mysterious in every issue.

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***Your opinion is important for me, so, contact if you want to say something!***

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and, they will do this work, and we will see lots interesting articles there.

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#### ***Other Practical Dipole/Monopole Geometries. Matching Techniques for Dipole/Monopole Feeds. : by Prof. Natalia K.Nikolova***

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Dear friends, I would like to give to you an interesting and reliable antenna theory. Hours searching in the web gave me lots theoretical information about antennas. Really, at first I did not know what information to chose for ANTENTOP.

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Now I want to present you one more very interesting Lecture - it is a Lecture about practical constructing of all shapes dipoles. I believe, you cannot find such info anywhere for free! Very interesting and very useful info for every ham, for every radio- engineer.

### ***Unusual Antenna Application***

#### ***The Wireless power Transmission System by Nicola Tesla : by Oliver Nichelson***

2

*Tesla described his wireless power transmission method by three characteristics: 1) the reduction or elimination of electromagnetic radiations, 2) that it operated through the earth, and 3) that the mechanism of transmission is an electric current - as contrasted with radiations. Modern analysts, on the other hand, model Tesla's transmission system on present day broadcast radio technology. This model assumes an antenna propagating electromagnetic waves into the air where these radiations either will not or will, depending on the presuppositions of the writer, bring about the effects claimed by the inventor.*

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### ***Interferences in Amateur Radio***

#### ***Interferences from Old Power Amplifiers: by Igor Grigorov, RK3ZK***

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*One of the possible causes of interferences to reception of the radio and television from Power Amplifiers (PA) is degradation of an output tube or an output transistor of the Power Amplifier (PA).*

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#### ***Trap in the Main: by Igor Grigorov, RK3ZK***

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*Back to 90<sup>th</sup>, it happened, that my power PA begun to produce TVI and very heavy TVI were appeared only on 40 meters. A low frequency filter that was installed on the PA had not given any effect. My researches showed me, that neighbours' TV-sets were overloaded by power signals leaking from my PA to wire of the main. Most power leaking was only on 40 meters. I did not know the reason for the damage till now, but I needed to remove the TVI. What could I do?*

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7	<p><b>Bottle Antenna:</b> by Sergey Mironov, RA1TW</p> <p><i>Any amateur can do the antenna during one hour. To do the antenna takes a half of hour and to tune the antenna also takes a half of hour. So, do not waste time and go to make the Bottle Antenna!</i></p>	40
8	<p><b>Five Elements VHF Antenna RN1NZ for 145 MHz:</b> by RN1NZ</p> <p>Very good and very reliable VHF Antenna!</p>	42
9	<p><b>Antenna X200:</b> by RV9CX</p> <p>Most of us are heard about VHF antenna X200. It is very interesting and very reliable two bands antenna.</p> <p>RV9CX made some modifications for the antenna, so, the new RV9CX-X200 is more suitable for doing at amateur conditions. Go to the next page for the new antenna!</p>	43

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	<b>My First QRP- Station:</b> by Oleg Borodin, RV3GM/QRP	
15	<i>Remember, '70-th when I was a young SWL, I has build my first direct conversional receiver. It was too wonderful for me because he is very simple, just a three transistors are in receiver's circuit and a few any details. I powered this RX by 9 volts battery of pocket broadcast receiver. I has not a good antenna and I used a piece of wire in my room. For the first testing construction I did not made a PCB and build this RX as "space" style on a piece of printed board. It was a 80m band version. Results was shocked me at once!</i>	59

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- This article was first published in a different form in 1990. The idea of a Tesla directed energy weapon causing the Tunguska explosion was incorporated in a fictional biography (1994), by another writer, and was the subject of a Sightings television program segment.*
- The Work of Jagadish Chandra Bose: 100 Years of MM- Wave Researches:*** by D. T. Emerson
- 21 *Just one hundred years ago, J.C. Bose described to the Royal Institution in London his research carried out in Calcutta at millimeter wavelengths. He used waveguides, horn antennas, dielectric lenses, various polarizers and even semiconductors at frequencies as high as 60 GHz; much of his original equipment is still in existence, now at the Bose Institute in Calcutta. Some concepts from his original 1897 papers have been incorporated into a new 1.3-mm multi-beam receiver now in use on the NRAO 12 Meter Telescope.* 87
- J. C. Bose. The Inventor Who Wouldn't Patent:*** by Prof Rajesh Kochhar
- 22 *A 100 years after Jagdish Chander Bose, India seems to have come to the painful realization that it is unlikely to make any worthwhile scientific inventions any more. It has therefore decided to invent a J.C. Bose that did not exist before. This Bose cannot be patented internationally but can certainly be put to good use in the domestic and NRI market.* 97
- Bose is one of the founding fathers of radio-physics, whose research acted as a bridge between the original discovery by Heinrich Rudolf Hertz and practical use by Guglielmo Marconi.*
- A Noble Man Without a Nobel:***
- Credit Line: <http://top-biography.com/9049-J.%20C.%20Bose/spfeat.htm>
- 23 *Celebrity author Leo Tolstoy has remarked in his short story entitled The Exile: God sees the truth, but waits.... This is exactly what happened, in case of J. C. Bose. Today, the world knows Marconi, an Italian experimentalist, as the inventor of radio waves. But it was Bose, who first invented a device called Mercury Coherer, which could transmit and receive radio waves. It is used in mercury tube and telephone. One of Marconi's close friends, Luigi Solari, a lieutenant in the Italian Navy, drew Marconi's attention towards Bose's invention. He made minor changes in the devices, such as the U-tube was turned into straight tube. A device just a replica of the Bose's instrument was presented for a patent by Marconi, on September 9, 1901. He was credited by the world for sending the radio signals across the Atlantic Ocean, for the first time.* 99