

ANTENTOP

ANTENTOP 01 2016 # 020

ANTENTOP is **FREE** e-magazine devoted to **ANTENna's**
Theory,
1-2016 **Operation, and**
Practice

Edited by hams for hams

In the Issue:
Antennas Theory!

UA6AGW Antenna V. 20-10.51
(14.0- 29.5- MHz)

Thanks to our authors:

Practical design of HF Antennas!

Prof. Natalia K.Nikolova

Propagation!

Nick Kudryavchenko,
UR0GT

Design of Dual 50/144- MHz
Antennas!

Aleksandr Grachev,
UA6AGW

Simple Tube Receivers!

Igor Vakhreev, RW4HFN

And others.....

Two Tube DSB Receiver



EDITORIAL:

Well, my friends, new ANTENTOP – 01 -2016 come in! ANTENTOP is just authors' opinions in the world of amateur radio. A little note, I am not native English, so, of course, there are some sentence and grammatical mistakes there... Please, be indulgent! ANTENTOP 01 –2016 contains antenna articles, History Articles, Simple Tube Receivers. Hope it will be interesting for you.

Our pages are opened for all amateurs, so, you are welcomed always, both as a reader as a writer.



Copyright: Here at ANTENTOP we just wanted to follow traditions of **FREE** flow of information in our great radio hobby around the world. **A whole issue** of ANTENTOP may be photocopied, printed, pasted onto websites. We don't want to control this process. It comes from all of us, and thus it belongs to all of us. This doesn't mean that there are no copyrights.

There is! *Any work is copyrighted by the author. All rights to a particular work are reserved by the author.*

73! Igor Grigorov, VA3ZNW

ex: RK3ZK, UA3-117-386,

UA3ZNW, UA3ZNW/UA1N,
UZ3ZK

op: UK3ZAM, UK5LAP, EN1NWB,
EN5QRP, EN100GM

Contact us: Just email me
igor.grigorov@gmail.com

NB: Please, use only plain text and mark email subject as: **igor_ant**. I receive lots of spam, so, I delete **ALL** unknown me messages **without** reading.

ANTENTOP is **FREE** e-magazine, available **FREE** at <http://www.antentop.org/>

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. I do not know what a term for one issue would be taken, may be 12 month or so. A whole issue of ANTENTOP holds nearly 10- 30 MB.

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

Publishing: If you have something for share with your friends, and if you want to do it **FREE**, just send me an email. Also, if you want to offer for publishing any stuff from your website, you are welcome!

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

Copyright Note:

Dear friends, please, note, I respect Copyright. Always, when I want to use some stuff for ANTENTOP, I ask owners about it. But... sometimes my efforts have no success. I have some very interesting stuff from closed websites however their owners keep silence... as well as I have no response on some my emails from some owners.

I have a big collection of pictures. I have got the pictures and stuff in different ways, from **FREE websites**, from commercial CDs, intended for **FREE using**, and so on... I use to the pictures (and seldom, some stuff from free and closed websites) in ANTENTOP. **If the owners of the Copyright stuff have concern**, please, contact with me, I immediately remove any Copyright stuff, or, if it is necessary, all needed references will be made there.

Business Advertising: ANTENTOP is not a commercial magazine. Authors and I (Igor Grigorov, the editor of the magazine) do not get any profit from any issue. But of course, I do not mention from commercial ads in ANTENTOP. It allows me to do the magazine in most great way, allows me to pay some money for authors to compensate their hard work.

So, if you want paste a commercial advertisement in ANTENTOP, please contact me.

Book Advertising: I believe that **Book Advertising** is a noncommercial advertisement. So, Book Advertising is **FREE** at ANTENTOP. Contact with me for details.

Email: igor.grigorov@gmail.com
subject: [igor_ant](#)

NB: Please, use only plain text and mark email subject as: [igor_ant](#). I receive lots spam and viruses, so, I delete **ALL unknown me messages** without reading.

73! **Igor Grigorov**, VA3ZNW
ex: UA3-117-386, UA3ZNW, UA3ZNW/UA1N, UZ3ZK, RK3ZK
op: UK3ZAM, UK5LAP, EN1NWB, EN5QRP, EN100GM

Table of Contents

Antenna Theory

Page

PLANAR ARRAYS, CIRCULAR ARRAYS

Prof. Natalia K. Nikolov

- 1 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 chose for ANTENTOP.
- 5- 18
- Now I want to present to you one more very interesting Lecture - it is **LECTURE 18: PLANAR ARRAYS, CIRCULAR ARRAYS**. Planar arrays are more versatile; they provide more symmetrical patterns with lower side lobes, much higher directivity (narrow main beam). They can be used to scan the main beam toward any point in space.....

HF- Antenna Practice

RX3MS Helical Antennas

Vladimir Turkin, RX3MS

- 2 Below there are described three Helical Antennas. All of the antennas were made and tested by RX3MS. The antennas later were repeated at several amateur's stations and the antennas showed good efficiency.....
- 19- 22

Modified Beverage Antenna

Igor Grigorov, VA3ZNW

- 3 I took the decision. At last! I took the decision to participate in CQ- WW- 160-Meter Contest. My setup for the Contest was IC- 718 and Beverage Antenna described at Antentop- 01, 2015. The antenna had termination resistor 450-Ohm/25-Wtt. It allowed me run the IC-718 on 50-Wtt without damage to Beverage's termination load. So I decided participate in the Contest as a Low Power (up to 150-Wtt) Single Operator...
- 23- 29

Attic Antenna for 40-, 30-, 20-, 17-, 15-, 12 and 10 meter Band

- 4 Eugene Viktorovich
- 30
- The antenna was installed in the attic. Antenna was matched with help an Automatic ATU in 40-, 30-, 20-, 17-, 15-, 12 and 10 meter amateur Bands. The Antenna worked satisfactory on the above mentioned bands.....

Simple Magnetic Loop Antenna for a Journey

- 5 Alexander Eryomin, R2DHF
- 31- 32
- The Magnetic Loop Antenna is designed especially for working from journey. The Antenna is ready for operation from disassembled to assembled condition in several minutes. Antenna contains cheap or not hard to find stuff. I spend less \$ 50.0 for kit for the antenna.

Table of Contents

		Page
	Beverage Antenna. Theoretical Look on Practical Result Igor Grigorov, VA3ZNW	
6	<p>My Beverage Antenna (that was described at: http://www.antentop.org/019/va3znw_019.htm. The antenna was successfully tested at CQ WW 160- Meter Contest (CW), CQ WPX (2016, CW) and ARRL International CW Contest (2016). I worked there with my IC- 718 using only 50... 90- Wt.</p> <p>However it stands interesting for me what is the theoretical data for my Beverage Antenna.</p>	33- 45
	UA6AGW Antenna V. 20-10.51 (14.0- 29.5- MHz) Aleksandr Grachev, UA6AGW	
7	<p>UA6AGW Antenna V. 20-10.51 can work in frequency range from 14.0 to 29.5 MHz that is covered 20, 17, 15, 12 and 10- meter amateur Bands. This is provided by tuning the antenna in resonance to the used band with help of a remote- control variable capacitor installed at the antenna. UA6AGW Antenna V. 20-10.51 is designed for easy and quick installation in the field....</p>	46- 49
	Three Element YAGI Antenna for the 20- meter Band Nikolay Kudryavchenko, UR0GT	
8	<p>Below described three elements YAGI for the 20- meter Band. Model of the YAGI was simulated by UR0GT. The antenna has very high gain- almost 14.4- dB at central frequency 14.15- MHz. Antenna covers all 20- meter band with SWR 2.5: 1.0 at the edges ...</p>	50- 51
	Compact Antenna for 160- meter Band for the DX- Window Nikolay Kudryavchenko, UR0GT	
9	<p>Below described Compact Antenna for 160- meter Band for the DX- Window. Model of the antenna made by UR0GT. Antenna has "compact" sizes related to the 160- meter band. However with the dimensions the antenna has good parameters at the DX- Window at the 160- meter Band.....</p>	52- 53
	Low Height Narrow Delta Antenna for the 80, 40, 20 and 15- meter Band Nikolay Kudryavchenko, UR0GT	
10	<p>Below described Low Height Narrow Delta Antenna for the 80, 40, 20 and 15- meter Band. The Antenna was simulated by UR0GT for DE7RAO, for his defined conditions of possibility for antenna placement. However the antenna design should be interesting for those amateur who has tied conditions for antenna installation or for amateurs who participated in field day.</p>	54

Table of Contents

		Page
11	<p>Simple HF Antenna for the 20-, 17-, 15-, 12- and 10- meter Band Andrey Korsakov, RA4NF</p> <p>Below described a very simple HF Antenna for the 20-, 17-, 15-, 12- and 10-meter Band. Antenna is fed by 50- Ohm coaxial cable. Antenna has very simple design and does not require any tuning if it made according the drawing....</p>	55
VHF ANTENNAS		
12	<p>Simple Vertical Antenna for the 6- and 2- meter Band Igor Vakhreev, RW4HFN</p> <p>Below described simple dual band vertical antenna for the 6- and 2- meter Band. Model of the antenna was simulated by RW4HFN. Antenna may be made from a rigid copper/aluminum wire. Antenna does not require any tuning elements. Antenna made according to the description already should work at the two bands.....</p>	56- 58
13	<p>Stub Vertical Antenna for the 6- and 2- meter Band Igor Vakhreev, RW4HFN</p> <p>Below described simple dual band vertical antenna for the 6- and 2- meter Band. Model of the antenna was simulated by RW4HFN. Antenna may be made from a rigid copper/aluminum wire. Antenna does not require any tuning elements. Antenna made according to the description already should work at the two bands....</p>	59- 61
14	<p>Dual Cross Vertical Antenna for the 6- and 2- meter Band Igor Vakhreev, RW4HFN</p> <p>Below described simple dual band vertical antenna for the 6- and 2- meter Band. Model of the antenna was simulated by RW4HFN. Antenna may be made from a rigid copper/aluminum wire. Antenna does not require any tuning elements. Antenna made according to the description already should work at the two bands....</p>	62-64
15	<p>Simple Three Element Vertical Antenna for the 2- meter Band Igor Vakhreev, RW4HFN</p> <p>Below described simple three elements vertical YAGI for the 2- meter Band. Model of the YAGI was simulated by RW4HFN. The antenna is very simple to make and tune. Antenna may be made from a rigid copper/aluminum wire....</p>	65- 66

Table of Contents

Page

UHF ANTENNAS

**Short Five Elements Antenna for the 70- cm Band
Yuriy Skutelis, RN3DEK**

67-68

16

Short Five Elements Antenna (length 50- cm) made of aluminum rod (or tube) in diameter 5- mm. Antenna designed for repeater sub- band. Antenna has gain near 7.4- dBd at 439.0- MHz. F/B at the frequency is 35.9 dB....

**Broadband Five Elements Antenna for the 70- cm Band
Yuriy Skutelis, RN3DEK**

69- 70

17

Broadband Five Elements Antenna (length 50- cm) designed on the base of Short Five Elements Antenna for the 70- cm Band (Antentop 01- 2016). The antenna has low SWR at the upper edge of the 70- cm Band. Antenna made of aluminum rod (or tube) in diameter 3- mm. Antenna has gain near 7.2- dBd at 439.0- MHz. F/B at the frequency is 35.3 dB.....

Propagation

**Black Holes in the Air
Igor Grigorov, VA3ZNW**

71

18

Article about Black Holes in the Air was published in Antentop Magazine http://www.antentop.org/black_holes.htm. As I mentioned there I did not observe Black Holes in the Air. At those times I say no. Time lasts....It happened in March- 2013 ...

Tube DC Receivers

**Simple Two Tube Direct Conversation Receiver
Aleksandr Viktor**

72

19

It is very simple DC receiver contains only two tubes. No one semiconductor there is here. This receiver made by me on the base of Kazuhiro Sunamura 12V- Tube receiver....

**Simple Four Tube DC Receiver for the 80- meter Band
Aleksandr Viktor**

73- 74

20

The receiver was made on the base of my experimenters with simple DC receiver described at previous article (Simple Two Tube Direct Conversation Receiver) and on the base of the receiver Kazuhiro Sunamura. There were used very old tubes however the receiver worked well with those ones.

Table of Contents

Regenerative Receivers

Page

21	Simple regenerative Receiver BARER 1 DedVova	75
----	---	----

The very simple regenerative receiver was made for 40- meter ham band. The receiver worked very stable. You did not need tune the R10 (Regeneration) through the band once it is already adjusted. The receiver was compared with two commercial ones- TECSUN PL600 and DEGEN- 1103. My regenerative receiver worked much better on the 40- meter band....

Experimenters

22	Experimenters with Non Snap Ferrite Cylinder Bead RF Chokes Igor Grigorov, VA3ZNW	76- 81
----	--	--------

Recently there are lots devices that contained some RF sensitive or vice versa RF generation parts inside. It is power AC/DC converters (aka power supply), Computers, Computer Monitors, et cetera. Most common way to radiate unwanted interferences or receipt unwanted interferences is cables going apart those above mention parts....

History

23	Time Machine. QSLs from the Past from E- QSL.	82
----	--	----

I had three call signs when I have been lived in Russia. It is UA3ZNW (1983- 1990), UZ3ZK (1990- 1993) and RK3ZK (1993- 2004). There were made near 30 thousands QSOs, I got several boxes of QSL Cards. However, I managed bring to Canada less the 100 cards from different calls....

24	MEMORANDUM ON THE BEVERAGE WAVE ANTENNA FOR RECEPTION OF FREQUENCIES IN THE 550 - 1500 KILOCYCLE BAND: BY Benjamin Wolf and Adolph Andersen	83- 90
----	--	--------

There are lots articles on Beverage Antenna. However one of the most important one is "Memorandum on the Beverage Wave Antenna for Reception of Frequencies in the 550 - 1500 Kilocycle Band" by Benjamin Wolf and Adolph Andersen, dated April 1, 1958. On the report there were based lots amateur and science researches on the topic Beverage Antenna.....



Table of Contents

Page

BOOKS

High- Height Invisible Antennas

25 Light description of the book and link to download.... 91

Shortened Helical Antennas

26 Light description of the book and link to download.... 92

Direction Finding Handbook for Wireless Operators : by: W. E. Crook

27 Preface to Second Edition: In preparing the second edition of this work, it was left desirable to extend its scope and cover the interests of the aircraft operator.... 93

Patents

Short Dipole Antenna

94- 100

28 Just description of the patent.....

