

ANTENTOP

ANTENTOP 01 2010 # 012

ANTENTOP is **FREE** e-magazine devoted to **ANTENna's**

1-2010

**Theory,
Operation, and
Practice**

Edited by hams for hams

***In the Issue:
Antennas Theory!***

Practical design of HF Antennas!

EH- Antennas!

Home brew Technique!

Regenerative Receivers!

QRP Transceivers!

And More....

UA1AIC PA on GU43B

**Flat EH- Antenna
UA1ACO**



EDITORIAL:

Thanks to our authors:

Prof. Natalia K.Nikolova

Nick Kudryavchenko, UR0GT

I.Kapustin, UA0RW

Igor Lavrushov , UA6HJQ

Paul W. Ross, W3FIS

V. Polyakov, RA3AAE

And others.....



Well, my friends, new ANTENTOP – 01 -2009 come in! ANTENTOP is just authors' opinions in the world of amateur radio. I do not correct and re-edit yours articles, the articles are printed "as are". A little note, I am not a native English, so, of course, there are some sentence and grammatical mistakes there... Please, be indulgent!

ANTENTOP 01 –2010 contains antenna articles, description of antenna patent, QRP- Stuff. Hope it will be interesting for you.

Our pages are opened for all amateurs, so, you are welcome 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 or drop a letter.

Mailing address:
209- 5879 Bathurst Str., Toronto, ON, M2R1Y7, CANADA

Or mail to: antentop@antentop.org
NB: Please, use only plain text and mark email subject as: **igor_ant**. I receive lots 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. Preview's files will be removed in this case. I do not know what a term for one issue will need, may be 8-10 month or so. A whole issue of ANTENTOP hold nearly 10 MB.

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

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 are failed. I have some very interesting stuff from closed websites, but I can not go to touch with their owners... as well as I have no response on some my emails from some owners.

I do not know, why the owners do not response me. Are they still alive? Do their companies are a bankrupt? Or do they move anywhere? Where they are in the end?

Business Advertising: ANTENTOP is not a commercial magazine. Authors and I (Igor Grigorov, the editor of the magazine) do not get any profit from the issue. But off 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. I have lots interesting stuff in Russian, and owners of the stuff agree to publish the stuff in ANTENTOP... but I have no enough time to translate the interesting stuff in English, however I may pay money to translators,

Email: igor.grigorov@gmail.com
igor_ant

subject:

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.

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!

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

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

So, if you want to put a commercial advertisement in ANTENTOP, please contact with me. A commercial advertisement will do ANTENTOP even greater interesting and various! I hope, readers do not mention against such commercial ads.

Book Advertising: I do not think, that **Book Advertising** is a commercial advertisement. So, Book Advertising is **FREE** at ANTENTOP. Contact with me for details.

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

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

Editorial

Table of Contents

Antenna Theory

Page

Aperture Antennas – Part I : by: Prof. Natalia K. Nikolova

- 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 to chose for ANTENTOP.
- Now I want to present to you one more very interesting Lecture - it is a Lecture **Aperture Antennas – Part II**. I believe, you cannot find such info anywhere for free! Very interesting and very useful info for every ham, for every radio-engineer.
- (Rectangular horn antennas. Circular horns.)*
- 5- 33**

HF- Antenna Practice

Directional Helical Antennas: by: I. Kapustin, UA0RW

- 2 Practical Design of a small sized two Directional Helical Antennas for the 20-meters Band.
- 34- 37**
- 3 **Narrow DEWD Dipole for the 80- meters: Nikolay Kudryavchenko, UR0GT**
- Practical Design of a small sized two Directinoal Helical Antennas for the 20-meters Band.
- 38- 39**
- 4 **Dipole Antenna for the 80- meters With Rectangular UR0GT- Match : By: Nikolay Kudryavchenko, UR0GT**
- It is an alternative way (compare to DEWD) to design a broadband antenna-use so called "UR0GT- Match." The match was offered by UR0GT at 2004 at HZ- Forum. The match was used to feed VHF- Antennas, but it works at HF too.
- 40- 41**
- 5 **Dipole Antenna for the 80- meters With Triangular UR0GT- Match: By: Nikolay Kudryavchenko, UR0GT**
- It is an alternative way (compare to DEWD) to design a broadband antenna-use so called "UR0GT- Match." The match was offered by UR0GT at 2004 at HZ- Forum. The match was used to feed VHF- Antennas, but it works at HF too.
- 42- 43**



Table of Contents

	Page
6	44- 45
DEWD Dipole for the 80- meters with a Stub Matching: By: Nikolay Kudryavchenko, UR0GT	
It is just a variant of a DEWD Dipole for the 80- meters with Stub Matching. The antenna has enough good parameters - Pass Band and Efficiency.	
7	46- 47
Narrow DEWD Dipole for the 80- meters with a Stub Matching: By: Nikolay Kudryavchenko, UR0GT	
It is just a variant of a Narrow DEWD Dipole for the 80- meters with Stub Matching. The antenna has enough good parameters - Pass Band and Efficiency.	
8	48- 49
Narrow DEWD Dipole for the 80- meters with an Inductance Matching: By: Nikolay Kudryavchenko, UR0GT	
It is just a variant of a Narrow DEWD Dipole for the 80- meters with an Inductance Matching. The antenna has enough good parameters - Pass Band and Efficiency.	
9	50- 51
Super Narrow DEWD Dipole for the 80- meters with A Stub Matching: By: Nikolay Kudryavchenko, UR0GT	
It is just a variant of a Narrow DEWD Dipole for the 80- meters with an Inductance Matching. The antenna has enough good parameters - Pass Band and Efficiency.	
10	52- 55
Simple Field One- Wire- Length HF Antennas : By: Igor Lavrushov , UA6HJQ	
Below will be described simple one- length- wire HF antennas. The antennas were designed for mountain's radio- expeditions. The main criteria were- low weight plus simplicity. All described below HF- Antennas were tested in Northern Caucasus Mountains with a transceiver FT- 817 and ATU MFJ- 902 and provided good result.	
11	56- 60
Flat EH- Antenna for 10- MHz: By: Vladimir Kononov, UA1ACO, St.- Petersburg	
Some days I heard 10- MHz. Good propagation conditions, lots stations but no antenna. Only 42- meters length of wire was connected to my ICOM-7000 through ICOM AT-180. So, I decided to make EH-Antenna for the band. To avoid too much job with cylinders (that are commonly used at EH- Antenna) I made a Flat EH- Antenna from stuff from my scrap- box. It takes only 3- 4 hours for making and tuning of the antenna.	



Table of Contents

		Page
12	<p>Flat EH- Antenna for 10- MHz in the Winter: By: Vladimir Kononov, UA1ACO, St.-Petersburg</p> <p>In three weeks the winter came in my town. I made more the 100 QSOs with 25 countries using power 30- Wtts. Antenna was covered by snow but it is worked. I did lots QSOs with the snow- EH-Antenna. As rule I could make QSO with any station that I heard.</p>	61- 62
Regenerative Receivers		
13	<p>Some Thoughts on Regenerative Receivers : By: Paul W. Ross, W3FIS</p> <p>After having monitored, and occasionally participating, in the discussions on the Yahoo Regenerative Receiver Newsgroup, I thought it might be of interest to throw in both some of my experiences, and professional thoughts. I suffer from being an E.E. by training, having grown up at the tail end of the vacuum tube era, as well as having held an amateur radio license for half a century.</p>	63- 70 101- 102
14	<p>Simple Short Wave Receiver : By: V. Egorov, UA3AB</p> <p>Note from va3znw: It was the first tube regenerative receiver that I have made by myself. At the far times I was a thirteen years old boy that fall into radio and certainly into amateur radio. I already made a transistors' then tubes' HF converter for my old tube receiver "Muromets." So, I could hear amateur stations.</p> <p>However, one friend of mine, old ham (he was at the times in his forties) told me about my converters:- "Good job! But.. what I would like to say... all the stuff (converter and receiver) you may change for one tube receiver. It would get the same reception."</p> <p>Another day he gave me an old soviet magazine "Radio" with the schematic. When the receiver was made and tuned, I discovered that the one- tube receiver really worked almost similar to converter with "Muromets."</p>	71- 74
Simple QRP Transceivers		
15	<p>A Multi Band Tube 10 w QSK Transceiver: by Igor Grigorov, UZ3ZK</p> <p>In the SPRAT # 67 (SPRAT is the journal of the G- QRP- Club) was published a circuit of a tube DC receiver. I made this G0ILL receiver and enjoyed of it perfect reception. Later I modified the receiver to transceiver.</p>	75- 78
16	<p>A 10- meter Band CW Transceiver : Vladimir Polyakov, RA3AAE</p> <p>It is a variant of a simple DC transceiver. Transistor of PA works like a mixer in receiving mode. So, there is no any commutation in the RF circuits. The transceiver has output power 0.35- Wtts, shift TX/RX- 400-Hz, RX sensitivity 2 microV. Power voltage is 15-V, current at RX/TX - 30/120-mA.</p>	79

Table of Contents

		Page
17	An 80 m CW Valve Transceiver :: by Igor Grigorov, RK3ZK	80

It is possible to build this transceiver in one evening using surplus parts. It has a sensitivity of near 5- microV and output power on 3.5- 3.6- MHz near 1-Wtts.

PA

18	Practical Photos for P.A. on Tube GU-43B: By: Nikolay Kisel, UA3AIC, Moscow	81- 86
-----------	--	---------------

Just photos and steps how to do a simple PA on a power tube GU-43B

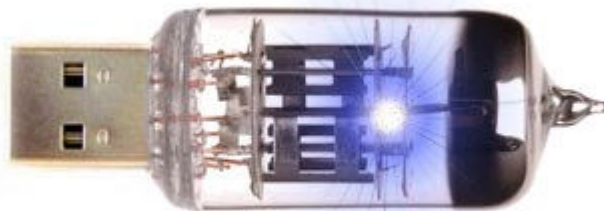
Linear Power Amplifier on G811: By: S. Bunin, L. Yailenko

19	The PA is designed for ham bands 160- 10- meters. It provides 200 Wtts CW/ 500 Wtts PEP SSB. Efficiency of the PA is 65- 70% in depend on used r\band.	87- 88
-----------	--	---------------

Patents

20	Ground and/or feedline independent resonant feed device for coupling antennas and the likes.	89- 100
-----------	---	----------------

Just a description of the patent



USB- TUBE