

HAM - MAG

The first free & monthly E-magazine for amateur-radio, SWL...



HAPPY NEW YEAR
2009 !

NUMBER 1
FREE ISSUE

JANUARY 2009
<http://www.ham-mag.com>



WELCOME !



Welcome to the very first issue of ham-mag in english.

I want to wish you a happy new year 2009 and hope this free magazine will be appreciated by all the OM.

For the short story, I made the french version of HAM-MAG in september 2008. After 3 months and 13 issues, there are more than 3,100 subscribers all over the world. But some readers wanted to have an english version.

It's done !

But to live, this magazine needs you.

We need your help, your informations, your articles, your ideas, etc.

This first issue is in test. For the next numbers we need some gasoline.

And that's why it's a monthly magazine for the beginning, Actually we have not articles enough to offer a weekly magazine.

The success will also come by the number of subscribers.

Don't forget, it's totally free and you have nothing to do. Just wait and you'll receive your issue in your e-mail box without ads.

For example, in the french version of the Website, we are able to offer now :

- Classified advertisements
- A gift (software) to download every week

Why not for the english website ?

So dear YL and OM. I send you again all the best wishes for 2009, happiness - health - prosperity !

Best 73's !
Vincent FAUCHEUX - F5SLD
HAM-MAG



1 workday, 364 days of holidays !

JANUARY 2009

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Thanks to : **HB9HFL, ON6MU, IZ7ATH, VK2ZAY, YO4PX, YO9FNR, K6LCS**

Thanks also to the retailers who believe in this magazine, to all the donators and OM who sent helpful messages.

You can contact us by E-Mail : ham.france@free.fr

Our websites :

<http://www.ham-mag.com> (English)

<http://www.ham-mag.fr> (French)

This issue has been sent to 660 subscribers

VHF 1/2wave vertical antenna for the 6-meterband (50 Mhz)

By ON6MU

1/2 wave antenna principle

A much better type of antenna than a simple quarter wave and that has more gain is the 1/2 wavelength vertical. We know that the impedance of the 1/2 dipole is 70 Ohms when we attach the coax in the middle, but what if we were to attach our coax directly to the end? The impedance at this point is high, very high, so we must make a matching device to match the antenna's impedance to the 50 Ohm coax. What would happen if we did not use this matching device? Well...you would know that this would result in a very very high SWR.

The bandwidth of these antennas are good, they can easily span the entire 50Mc band and more with a low SWR.

The antenna and ground are connected across the tuned circuit while a 50-ohm coaxial cable is connected to taps on the inductor. The tuned circuit presents a high impedance to the antenna and the tapped inductor steps this impedance down to 50 ohms. Adjusting the tuning capacitor tunes out slight reactance variation if the antenna is not an exact electrical half-wavelength.



Parts list

4 pieces of 1 meter alu or copper tubing:

- one 18 mm diameter
- one 15 mm diameter
- one 12 mm diameter
- one 10 or 8 mm diameter

1 female PL 259 chassis

some enameled wire (insulated wire like from a transformer etc.) of 0,8 mm thick

a coil holder of 8 mm diameter

two 25pF regulable capacitors

A robust PVC box of approx 30x50x18 mm and 2mm or more thick

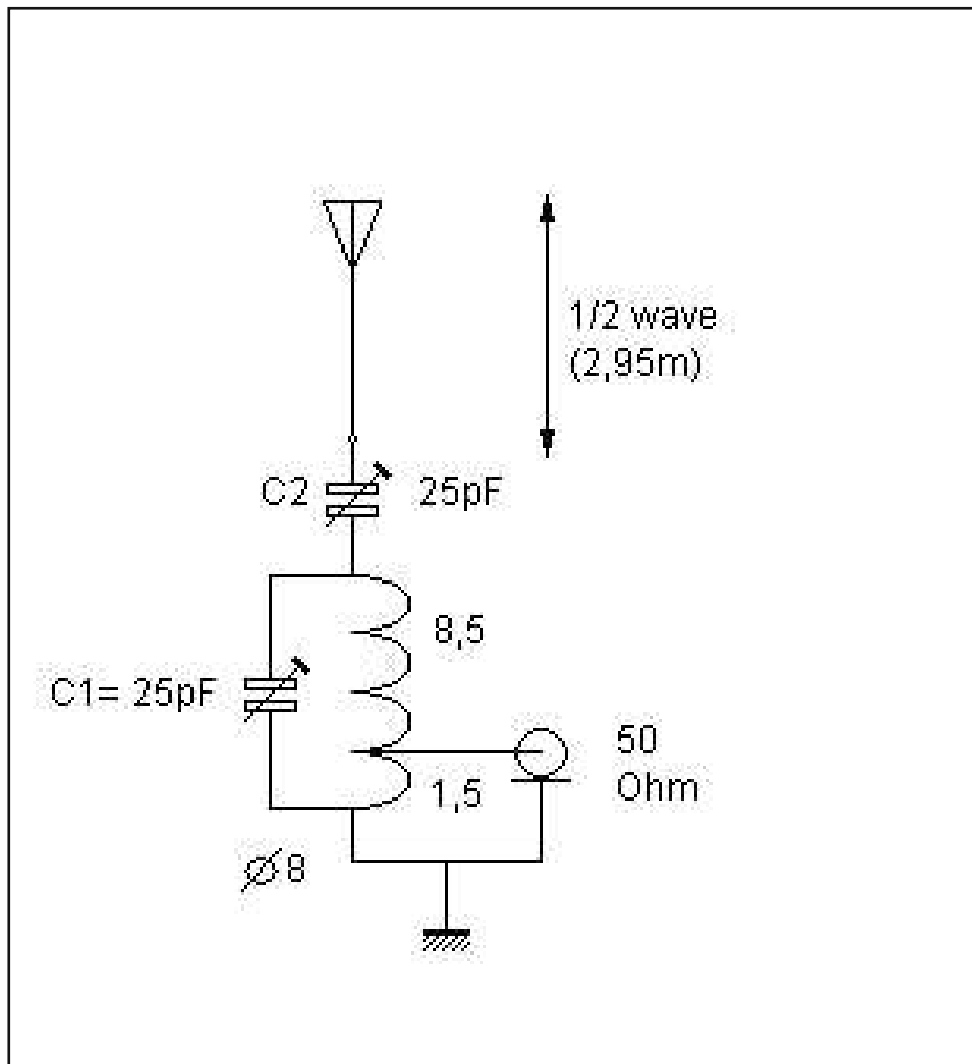
a piece of hard insulating material that snugly fits inside the base tube, like:

fiberglass, nylon, hard pvc, hard wood, bamboo etc... as long as it's very strong, stress and weather resistant.

and a few inox hose clamps

Note: there are many ways to build your antenna and I'm sure some can come up with better mechanical designs than described here although the design and material used here is cheap and easy to find. Also, the diameters of the tubing described here is not too critical.

Schematic



The antenna

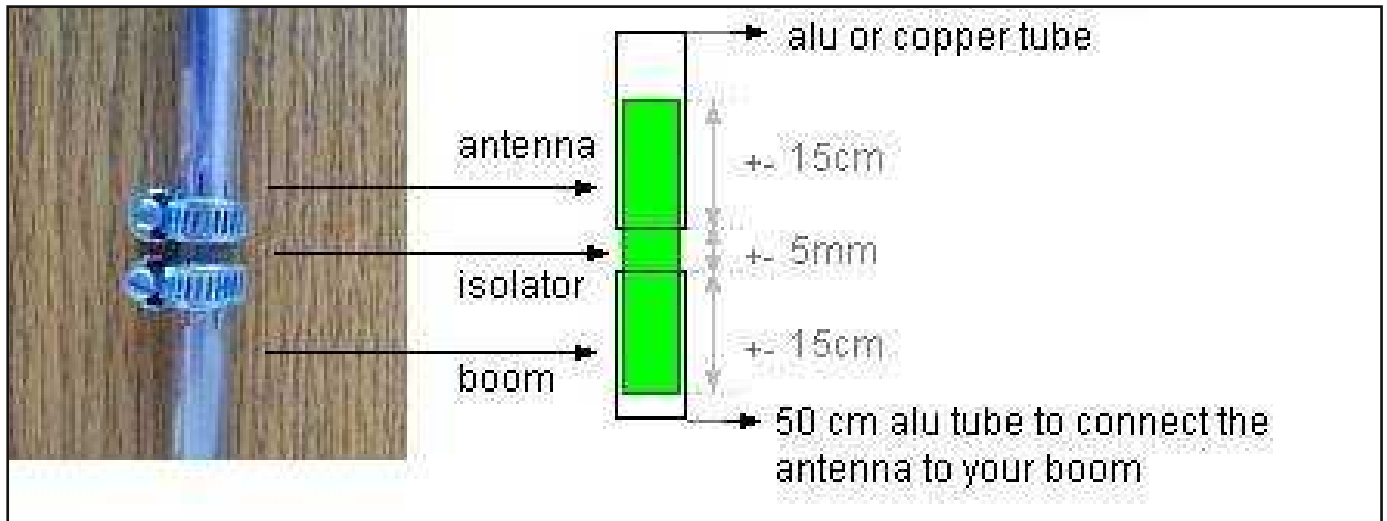
Construction:

The vertical itself is constructed out of four overlapping sections of aluminum tube whose sizes are given.

- saw the 1 meter 18 mm alu tube in half. One part (50 cm) will be used as a boom and the other as the first part (also 50cm) of the antenna.
- saw some grooves (approx 1,5 cm) in both halves of the tube to allow a hose clamp to tighten everything up.
- same goes for the other tubes that fits inside eachother. All tubes are firmly fixed together by using hose clamps.
- Measure from the base up 2,95 meters. You can always tune the antenna to its best SWR by sliding the top tube in or out.



- saw a piece of that hard insulating material of your choice and fit it 10 cm in the antenna and boom part and leave a gap of 3 mm between them.
- hammer down one end of each of the 3 radials (3 x 22 cm) so it becomes a bit flatten. This will make things easier to screw tight with the hose clamp. These radials are fitted on the boom section.



The little black box:

Here is where all the secrets are stored HI. I used a little plastic box where I placed the LC-circuit and the PL connector.

I also drilled two little holes where you can regulate the two capacitors with an little isolated screwdriver. Afterwards you can seal the holes up to prevent moisture from entering the box.



The LC tank-circuit:



- Wind 10 turns of 0,8mm cul wire around the 8mm coil holder and make a tap at 1,5 turns. There is no spacing between the windings.

- The smallest part (the "cold side" 1,5 turns) of the coil is where your centre part of the connecor/coax is connected to. The above schematic shows how.

As you can see there are two wires coming out of the box (which contains the LC): one for the antenna and the other for the ground (being the connecting boom piece).

Connect the wires accordingly and be sure to seal everything up.

Tuning :

- Get your old (t)rusty SWR-meter and and some 50 Ohms coax and connect your transceiver to it.
- Set the two capacitors to halfway to start with.
- Mount your antenna temporary 1,5 meters from the ground for the first tests and measure the antenna length (the boom piece NOT included) at 2,95 meters and try to ground the boom.
- Find a CLEAR frequency and set your transceiver to MINIMUM possible power and use a carrier type modulation (CW, AM, FM).
- Tune C1, which is the most important and critical capacitor, till the SWR gets a s low as possible on your desired centre frequency (51 Mc)
- Then tune C2 till the SWR is even more lowered or even 1:1.
- Repeat the last two steps at location if needed
- Fine tuning your antenna can be done by sliding the tubes in or out. Sometimes when your place your antenna higher or when the antenna has obstacles in its proximity the SWR can vary from the one you noted first. Raising or lowering the length of the antenna should fix it.

Specifications 6MU Vertical Antenna

Total length (including the 50cm mounting boom piece): 3,5m (2,95m effective)

centre frequency: 51 Mhz

bandwidth: 2 Mhz

maximum tunable frequency range: 49...53 MHz+-

impedance: 50 Ohms

Gain: 3,6 dBi

Maximum power using the components described: 20 watt

NO counterpoise or radials needed if the boom is grounded or the boom length is $\geq 1,5\text{m}$

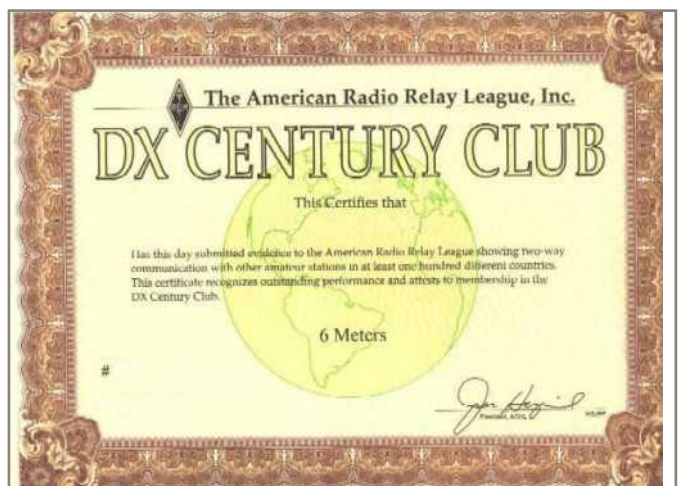
DC grounded (no static buildup)

Height: 2,95m

If needed, it can be disassembled into a very small bundle no longer than the longest element.

Be sure to seal everything up to avoid moisture, corrosion etc.

73's from ON6MU



O.M. OF THE MONTH HB9HFL - GIO

I was born in Italy, near Torino, in 1951. Came to Switzerland in 1967, and studied electronics at the "Ecole d'ingénieurs" in Geneva.



Amateur radio license since 1966 with the Italian call I1CJG and since 1993 with the Swiss call HB9HFL.

Now working in the the Systems Engineering, data acquisition and telecommunications with the Federal Office of Meteorology and Climatology (MeteoSwiss). Responsible for the national network of meteorological measurements ANETZ.

My hobbies are radio (HF-VHF-UHF, DX, Mobile operation, Digital modes, Construction of equipments and antennas, Satellite...), photography, computers, modern- languages and I'm active in human rights (Amnesty International and Unesco).



Younger, I traveled in some of the European countries, the USA, Africa... Now I tend to stay put... Well, I wish you all the best and good luck! Best greetings from Switzerland. Giovanni / HB9HFL

AMATEUR RADIO, A HOBBY WITHOUT FRONTIERS BY GIOVANNI CONVERSO, HB9HFL, SWITZERLAND

What is amateur radio?

Who are the radio hams?

How can they communicate on the air waves in this "internet" era ??

The following article attempts to answer these questions. Ham radio is also a token of friendship and of real-life experience. Technique alone would not suffice if not directed by inner feelings...



Nowadays radio communication has become so common that no one is surprised to hear, by simply pressing a button, a radio broadcast... But only few know that it was discovered by the first radio amateurs. In fact, it was in 1896 that the most famous radio amateur of all, Guglielmo Marconi, acquired his first patent for a wireless communication system. Radio was born

For more than a century people have been communicating on the radio waves with home-made transmitters and receivers: they are the radio hams. They are men and women of all professions, all social status and all age groups, interested in radio and telecommunication techniques.



Radio amateurs can establish contact with other amateurs' world wide, they can discuss, communicate by telegraphy or teleprinter, exchange e-mails, pictures, files, etc., in the bands of radio frequencies specially assigned to them.

Radio amateurs are authorized to build their own equipments and to experiment with all types of antennas. They transmit either from home, in the car, boat or plane, or during a mountain race. In mountains they install relays to transmit their messages. Satellites built by radio hams encircle the earth...

The radio amateur hobby is a powerful means of bringing people together, without race, colour, nationality or religious discrimination. I would like to relate a personal experience lived thanks to the radio.



This story began on the 13th March, 1997 at 6 o'clock in the morning, when I was exploring the amateur bands of my receiver. Suddenly a very weak signal caught my attention. I put on the headphones and concentrated intently on this small voice that repeated some words, then disappeared in the background, then reappeared seconds later. After some very careful tuning of the receiver, I recognised it was a radio amateur.

Quickly I turned on my transmitter and tried to call him in English. The contact was difficult as propagation conditions were very bad. I understood with difficulty the name "Ivo" and the country: Croatia. It was difficult to continue the contact so we decided to try again the following day, early in the morning, on the same frequency (3.753 MHz).

After a few radio contacts with Ivo, always very well appreciated despite reception difficulties, I learnt that he lived in the centre of the city of Dubrovnik and that he had only a very modest antenna, just a few meters of simple wire.

I also learnt that Ivo was blind and had suffered a lot during the war that had destroyed ex-Yugoslavia some years ago. I had a much sympathy when he spoke of his family and friends that he could not meet anymore, as all these people were located in another part of ex-Yugoslavia, to which access was forbidden to the Croatians. For Ivo, the only means of communication with them was his radio, as the telephone was very difficult and costly, and the letter post did not work at all...

So it was necessary to improve Ivo's radio station, starting with installation of a good antenna. Friends of mine and I decided to send him a dipole antenna. When the package arrived at Dubrovnik Ivo was immediately summoned to the customs office for explanations and justifications... He was very scared by the idea that they would confiscate this precious object. He went to the office accompanied by his daughter Katarina and friend Miro, also a radio ham. All feared the worse! Thank goodness, the radio amateur license was valid and Ivo, after signing lots of forms and going through more formalities, went home, his heart jumping for joy! The next day he had to resolve the practical problem of installing the antenna. In fact, how to fix this relatively long wire (20 m) in this conglomeration of old houses with telephone lines, electric wires, water pipes, clothes lines, and all whilst being without his sight? Fortunately Miro and Katarina were there.

On 27th March 1997 at 6 o'clock in the morning, I tuned my receiver to the frequency of 3.753 MHz... A few seconds later Ivo's voice appeared loud and clear. The contact was excellent!

The following days, Ivo made contact with the stations on the other side of ex-Yugoslavia, mainly with family and friends. With the new antenna, communication worked wonderfully! Much better than the telephone!

Ivo and I contacted each other regularly on the frequency of 3.753 MHz. We are not alone anymore. Several other radio amateurs come regularly to this meeting place of friendship and solidarity. (It is now known as The Euro-net.)

If you wish to know more about the different activities of the radio amateurs, visit the following Web Sites:

1) The radio club of Fribourg : <http://www.hb9fg.ch>

2) The radio station of HB9HFL :

<http://www.qsl.net/hb9sin/hb9hfl1.htm>

Good surfing and see you soon on 3.753 MHz...

Giovanni,HB9HFL



EARPHONE + MICROPHONE FOR CONTEST

By IZ7ATH

The idea to build this microphone comes during a contest in which I took part in mix-class: you always need one hand for the keyboard, one for VFO, one for the microphone / key and one needed to write partial calls : yes... But we have only two hands !



I bought an earphones+microphone used within PC for internet-chatting (\$7); I connected it directly to my RTX but audio level was too low (anyway you need 6-9V) ;
so I built a pre-amplifier using a simple chip (TL082) with about 10 db gain; than the audio level was ok... In less than one hour the micro was ready ! I put the pre-amplifier in a small plastic-box using the 8V accessory pin on my RTX instead of a 9V battery, but I started having problems; vox was mad and audio distorted ! I spent one day to solve this problem and at the end..it was solved !
I added also two push-button (frequency UP/DOWN, useful in RTTY operation).

Componentes used are few; on the microphone-socket (audio pin) I mounted a 200 Nf ceramic-capacitor; on the 8V pin there is a few microhenry coil, connected to the capacitor and a ferrite bead: those help me to solve the above RF problems.
If needed, you can use the same chip as a high-pass filter.
Electric diagram is very easy: gain changes with R6; with this value it's around 15, if you make it lower gain will increase.
Mount the ferrite bead nearest to the chip input ;

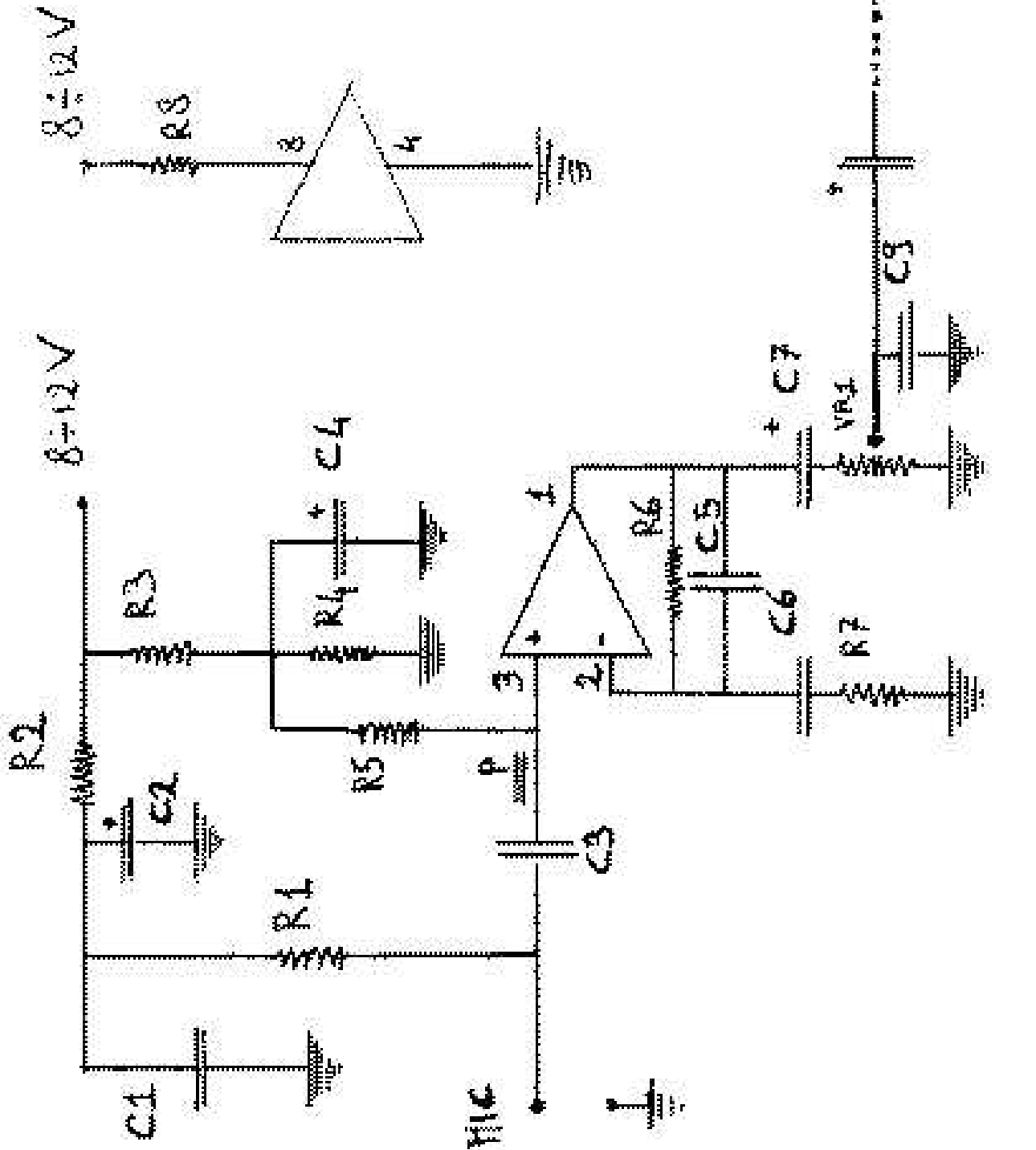


Test the microphone in the following way :
connect the micro to your RTX; feed the micro with an external 9V battery; audio level should be low (if not way to build a pre-amplifier?) but clear; switch on the preamplifier (fed always with 9V battery); tune trimmer VR1 for a good ALC value; test your vox system; if all is ok, use the 8V pin on your RTX instead of 9V battery: problems?? I hope not !

Best 73's ! IZ7ATH
(See electric diagram on next page)

COMPONENTS

R1=1 Kohm R2=1 Kohm R3=10 Kohm R4=10 Kohm R5=10 Kohm
 R6=47 Kohm R7=1 Mohm R8=100ohm VR1=4,7 Kohm
 C1=10 Nano Farad Ceramic C2=10 Micro Farad Elettrolytic 16v
 C3=220 Nano Farad Ceramic C4=10 Micro Farad Elettrolytic 16v
 C5=3,9 Pico Farad Ceramic C6=22 Nano Farad Ceramic
 C7=10 Micro Farad Elettrolytic 16v C8=1 Micro Farad Elettrolytic 16v (near
 C9, not signed in schematic) C9=10 Nano Farad Ceramic
 C10=200 Nano Farad Ceramic L1=Inductance Miniature (similar to a resistor)
 P= ferrite IC1=TL082 (or similar TL071,LM741 etc). Plastic Box 4x2x7 cm
 NOTE : about inductance, it's soldered directly on Mic jack and its value is
 some millihenry (not critical).

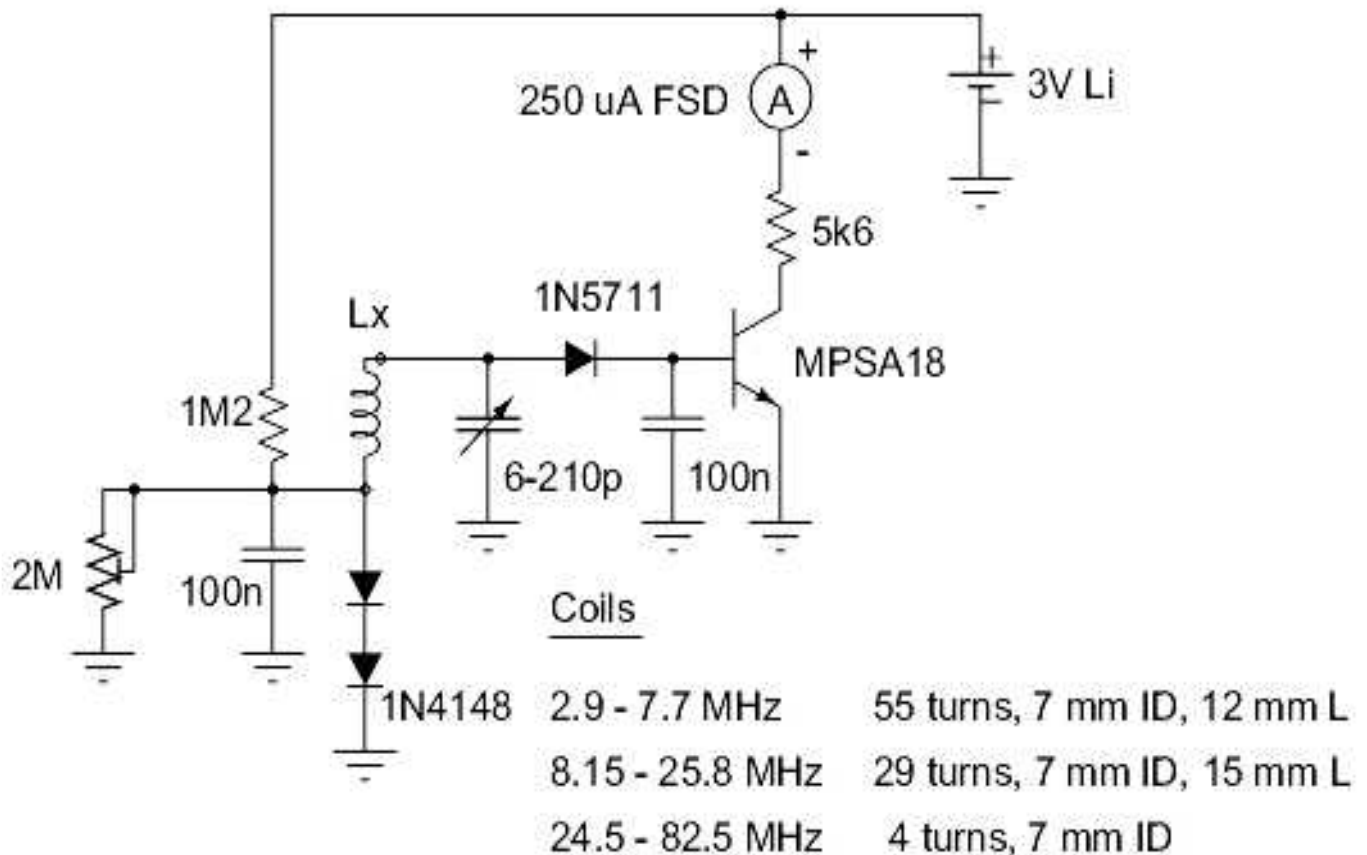


HF Wavemeter by VK2ZAY

Why build a wavemeter in these days of frequency counters, CROs and spectrum analysers? Well it is a lot cheaper than a spectrum analyser, easier to build and can still tell you if you have significant harmonic energy in your signal or that you've tuned up to the right harmonic or mixing product. It also doubles as a field strength meter, RF current probe/sniffer, etc. It is a fun, if somewhat retro way of seeing what RF something is pumping out, be it your prototype on the bench, or a proximity smartcard security reader in the field.

The circuit is heavily inspired by Charles Wenzel's field strength meter. It uses a diode dropper arrangement to provide a stable forward bias for the 1N5711 detector. The pot shown in the circuit diagram was replaced in the practical circuit with a fixed resistor, but using the pot offers the ability to set the quiescent current. The exact amount is a trade off between sensitivity and moving the meter pointer too much. Mine sits on about "1" on the scale when a coil is plugged in.

Sensitive Wavemeter



The unit is constructed in a small jiffy-box, the 250 μ A FSD VU meter taking most of the box volume. The meter comes from eBay seller KW Tubes, I bought a box of them. They are excellent, except they are glued shut so you can't (easily) change the scale, also the solder tags are nearly impossible to tin without filing them back to what appears to be a rather light on the copper brass. The power is supplied by a 3V lithium cell (CR2025). Current consumption is only about 10-15 μ A when a coil is plugged in and no signal is being detected, it drops to less 2 μ A when there is no coil plugged in, so no battery switch is required. The few components are mounted on a postage-stamp sized scrap of PCB using my usual technique. A polyvaricon tunes the coils and is fitted with a calibrated dial produced with the help of XYLs laminating machine. The PCB is mounted on the back of the polyvaricon internally with the common leg soldered directly to the board. The coil plug is an RCA, internally to which a short "transmission line" of magnet wire twisted pair runs from the detector board.



The coils are wound on 7 mm OD clear plastic soda straws (from Subway, they make great coil formers). Three coils are used to cover from 2.9 MHz to 82.5 MHz. There is a small gap near 8 MHz due to an excessive change in distributed capacitance when I potted the lowest frequency coil in wax. I had anticipated the problem and spread the turns out a little before potting, but the magnitude of the change exceeded the headroom I gave it. This could be easily corrected by removing a few turns.

The unit was calibrated using my signal generators and a frequency counter. Because of its fairly small size, the dial accuracy/detail isn't especially good, but for the purpose of checking harmonics, spurs and sniffing circuits this is of little consequence.

A better layout is recommended for extending the frequency coverage into higher VHF and UHF. Try forming the inductor as a thick loop that sticks out directly from the circuit board. Such a device could be custom built on a piece of PCB (and not much else except for the meter). In the opposite direction a larger capacitance cap would be useful, but there is nothing stopping MF coverage with the polyvaricon cap. In the picture the 4th coil actually plugged into the unit is a MF coil which covers down into the MW broadcast band (but the dial is not calibrated for it), it is about 150 turns over 10 mm on the 7 mm OD straws. You'd probably need at least two coils to cover all of MF nicely, and LF probably several more unless you get a better cap. A straight-line frequency cap (log cap) is strongly recommended for easiest use, unfortunately my stock of polyvaricons are straight-line capacitance (linear) so frequencies bunch towards the top-end. A larger knob or even a reduction drive improves the usability of the unit.

73's VK2ZAY

THE DX NEWS

From the Web (tnx opdx, Indx...)



4A, MEXICO

Members of the DXXE (Mexican Contest and DX group) are now active celebrating their 4th anniversary with the special callsign 4A1DXXE until January 6th. Activity will be on 160-6 meters CW, SSB and RTTY. QSL via N7RO and the LoTW.



CO8, CUBA

Eduardo, CO8LY, states that if somebody needs a confirmed QSL from Cuba, he is active on 160 meters also on others bands in PKS31, RTTY, CW and SSB. For a sked contact him by email : co8ly@frscu.ciges.inf.cu



CU8, AZORES (Lighthouse)

Operators Antonio/CU8AS, Ruedi/HB9CQL and Hermann HB9CRV (CT3FN) will be active as CU8W from the Albarnaz Lighthouse (DFP FAZ-02, ARLHS AZO-016, TWLHD WLH CU-008) on Flores Island (EU-089, DIP AZ-008, WLOTA LH-0947) between January 19-23rd. Activity will be on the lower bands in CW and RTTY. QSL via CT1GFK.



CV5, URUGUAY

Lupo/CX2ABC, Julian/CX5BE, Pedro/CX5BW, Nelson/CX6ACY, Jorge/CX6DAP, Gustavo/CX7AT and Daniel/CX9AU will be active as CV5A from Isla de Flores (SA-030), on January 22-26th. 160 to 2 meters in CW, SSB, RTTY and PSK31. They will also active in the CQ 160-Meter CW Contest (January 24-25th) as a Multi-Op entry. QSL via CX2ABC.



E4, PALESTINE

An Italian group is active as E44M this week between January 1-11th. Activity will be on 160-2 meters using CW, SSB, RTTY and all the digital modes Team : Salvador/C31CT, Simone/IZ0BTV, Bello/IZ0EGM, Giorgio/IZ4AKS, Pasquale/IZ8IYX, Vini/IK2CIO and Leszek/SP3DOI. Operations mainly on digital modes. Web page : <http://www.dxcffee.com/e44m>



FT5W, CROZET ISLAND

Florentin, F4DYW/FT5WO, is now active around 14120 khz. QSL via F4DYW.



HK, COLOMBIA

Cody, KC2LSD, will be active as HK3/KC2LSD between January 9-15th. Activity will be mostly at 2300z on 40/30/20 meters,



HS, THAILAND

Kurt, HS0ZBS, from Phanom Sarakham, East Thailand, is active daily until January 10th, using the OLIVIA Mode. He starts at 1100z, on 14106.5 or 14107.5 kHz, calling CQ for 10 minutes.



MD4, ISLE OF MAN

Operators David/G3NKC, Martin/G4XUM and Bob/MD0CCE will be active as MD4K during the CQ 160-Meter CW Contest (January 23-25th) as a Multi-Op entry. QSL via G3NKC.



CANADA - SPECIAL PREFIXES

Look for Canadian amateurs to use the following special prefixes between January 1st and February 28th to celebrate the 400th anniversary of Galileo using of optical instruments to inspect the universe. Also, please note that this year is the International Year of Astronomy (IYA). Some Canadian amateurs will exchange their prefixes as follows:

VE changes to CG VO changes to CH | For example: VE7DAO = CG7DAO

VA changes to CF VY changes to CI | VA3DAO = CF3DAO

The following are announced operations using the special prefix callsigns for the IYA:

CG3OIJ - Operator Darin, VE3OIJ; on 80m-70cm (WW Loc. FN25EJ). QSL via VE3OIJ, by the Bureau, eQSL or direct to: P. Darin Cowan, 674 Southmore Dr. W, Ottawa, ON K1V 7A1, Canada.), or CG9NC - Paul, VE9NC, from Hampton, New Brunswick; mainly on 20 meters on the Digital modes. QSL via VE9NC.



T8, PALAU (OC-009)

Hide, JM1LJS, is active as T80W until January 5th. Activity on 80 to 6 meters CW and SSB during his spare time. QSL via his home callsign. Web page : <http://radio-dream.com/t80w>



VP8, FALKLAND ISLANDS (YL Op)

An inter- national group of YLs will activate the Falkland Islands (SA-002) between January 17-31st. Each operator will be signing with the callsign "VP8YL*", where the third letter of the suffix will be assigned to each YL operator at beginning of the operation. YL operators mentioned at present include: Janet/VP8AIB, Chantal/PA3GQG, Unni/LA6RHA, Jeanie/WA6UVF, Mio/JR3MVF, Liz/M0ACL, Victoria/SV2KBS, Nicky/M5YLO and Ruth/IT9ESZ. The activity will be mainly on SSB, on all bands, but only 20 hours every day. QSL via operator's home callsign. Website : http://www.radioclubs.net/aa_vp8yl/



YE1, INDONESIA

Members of the Bekasi DX Contest Club (YE1ZAT) will be active during the CQ 160-Meter CW Contest (January 24-25th) as a Multi- Op entry, the CQWW WPX RTTY Contest (February 14-15th) as a Multi-Single entry and the CQ WW WPX SSB Contest (March 28-29th) as a Multi-Single entry. Operators mentioned are Joz/YD1JZ, Danu/YD1GCL, Terry/YC1KAF, Yon/YB1CCF, Arif/YE1AA and Heri/YB1KAR. QSL via YE1ZAT, by the Bureau, e-QSL or direct (QRZ.com).



ZD8, ASCENSION ISLAND (AF-003)

Six members of the Cambridge University Wireless Society will active as ZD8UW between January 2-9th. Activity will be on the HF bands using CW and SSB. Operators mentioned are: Hugo/ M0HSW, Tom/M0TJH, Simon/G4EAG, Michael/G7VJR, Gordon/G3USR and Martin/G3ZAY. QSL via G7VJR. The logs will be uploaded to LoTW.

DICTATORS AND AMATEUR RADIO

by Francisc Grünberg, YO4PX

Amateur radio was always contemplated by dictators with distrust and fear, as a suspect and potentially dangerous avocation. The ability to transmit messages over the barbed wire of the "Iron Curtains" and across heavily guarded borders, where weapons are pointed more into the country than out, was associated in the Romanian People's Republic, and in the other former or current totalitarian régimes as well, with the activity of spies on the enemy's payroll. In the dictators' paranoiac imagination these spies, disguised as radio amateurs, were trying to undermine the "heroic effort of the people for the construction of the new society": another name for the total control and submission of its citizens, the final endeavour of all régimes with socialist, communist, military, tribal or fundamentalist ideologies.

Risking the simplification inherent to any generalization, the degree of democracy present in a country is directly proportional to the number of its licensed radio amateurs, the liberties they enjoy and the administrative obstacles they may or may not confront. Today, an indication of such freedom is the absence of bureaucratic hindrances imposed on the importation of amateur radio rigs, getting a transceiver through customs at national frontiers, and the willingness to allow visitors' time-limited amateur radio activities.

Western democracies acknowledge radio amateurs' merit, as pioneers of the short waves to humanity's benefit and for the services they rendered and continue to render to their communities. Laws in these countries grant radio amateurs and their equipment freedom of movement and activity thanks to reciprocal agreements. The CEPT Convention provided a huge step forward as it simplified operation for amateurs of the signatory countries.

In Spain amateur radio is considered a form of art. In Güimar, Canary Islands, a statue was dedicated to amateur radio, with a syrinx (panpipes) representing the five (in 1974) amateur short wave bands. Many American presidents proclaimed amateur radio a national resource.

For whole decades BY1PK was the only workable station in China - until silenced by the infamous Cultural Revolution. Now we hear many BY calls and, on the VHF and LF bands, thousands of licensed QRP stations. No doubt the tenacious efforts of Martti Laine, OH2BH played a decisive role in this opening to the world.



After many years of silence in Saddam Hussein's Iraq, a single station, YI1BGD was licensed. This followed a demonstration by Erik Sjölund, SMOAGD, who made some 50 contacts before Iraqi officials who were amazed by the number of hams eager to contact a new country.

North Korea authorized only a few sporadic operations, the most productive being the activity of Ed Giorgadze, 4L4FN. He made more than 16,000 QSO's before the authorities shut him down. KA2HTV's recent failure doesn't offer much hope the situation will soon change.

Myanmar's (Burma) military junta is quite reluctant to issue licenses to foreign operators. But they are occasionally heard, especially when intended to convince the generals that liberalizing amateur radio could boost the country's image to a world concerned by human rights violations.

Contact with an Albanian station was an unattainable dream during the Stalinist dictatorship of Enver Hodja. Now there are some active stations thanks to powerful associations that championed getting a ZA call sign on the air after many decades.

In Poland all amateurs were forced to hand over their equipment following the imposition of martial law, inspired by the Soviet Union, in December 1981. General Jaruzelski stifled in bloodshed the protests of the trade union Solidarnos?, and the SP prefix was absent from the bands for almost two years.

Turkey for many years was prominent on the Most Wanted Countries List, now a few local stations and occasional visitors can be worked from TA-land.

Under the Taliban régime licensing a YA station was hardly conceivable in a country where the most elementary human rights were violated. Now hams working for international organizations are sporadically active from Afghanistan.

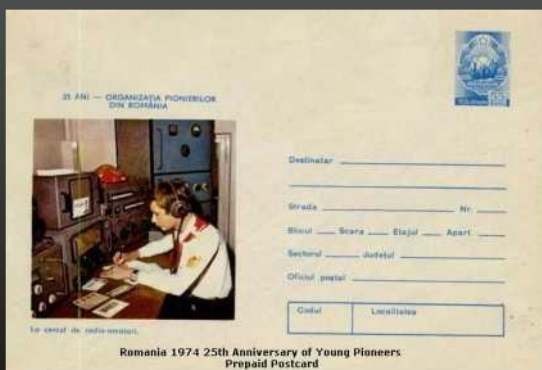
But where tradition is shattered, short instruction courses and donated gear cannot replace the passion and knowledge transmitted from generation to generation, from mentor to disciple, which ensures the perpetuity and development of the hobby. Hopefully, the spirit will reignite in Libya, Yemen, Rwanda, Iran, Sudan, Mount Athos, Somalia, Congo, Cambodia, Laos, countries and entities where amateur radio activity is inexistent or drastically restricted.

There are cases when the oppressive régime feels itself impregnable and magnanimously allows the licensing of a few "reliable" residents, intimates of the power wielders, for propaganda's sake to defend itself from the international amateur radio community's disapproval. Some dictatorships, after lengthy negotiations, authorize time-limited activities for foreign operators present as United Nations officials, NGOs or peace-keeping forces.

In Romania the dictatorial régime branded amateur radio as well. For 45 years the state of one's "dossier" was decisive in obtaining a license. In the 1950s those applicants who hadn't a "healthy origine" (i.e., originated from a family of workers or peasants) could experience huge difficulties, and not only in the realm of amateur radio. Family members living in the West, unfavourable information from the schools' secretary of the Communist Party, from the college or employer's "cadres office" (today's personnel office) regarding the applicant's lack of enthusiasm and attachment to the "Party Line," denunciations, containing mostly mendacious and misinterpreted information - all were grounds for denial without explanation of the application or suspension of a previously issued license.

Truly impartial historians of Romanian amateur radio should record its decades-long

constraints as subordinate to the army. This practice followed piously on the heels of the Russian pattern. The Securitate (the former Romanian secret police) exercised relentless control of the licensing procedure through the so-called Higher Radio Commission, overseeing the entire activity of the radio amateurs, beginning with the assignments in leading positions in the county clubs and in the Romanian Amateur Radio Federation and ending with the accurate inventory of the equipment owned.



In the 1980s the Radio Control Centres launched a series of residential inspections and license suspensions for varying periods of time. Was it merely coincidence that many holders of those suspended licenses were also members of reputable foreign clubs? This group included the most active and notable amateurs, authentic ambassadors of Romania on the air. Yearly "informative materials" drawn up by the Securitate and presented with the force of "truth" cited "negative aspects," like "relations with foreigners" (regulated by notorious Law 23 requiring compulsory detailed reports about the nature of these relationships and their progress), the correspondence of amateurs, alike the correspondence of all other presumptive "unfaithful" citizens, was inspected and systematically censored. Receiving a transceiver from friends or relatives in Western countries was a terrible humiliation and a matter of suspicion - an opportunity for blackmail.

But not only amateur radio was subject to thorough supervision. The presidential couple Ceausescu deemed profoundly undesirable : computers, video recorders, TV antennas pointed towards Bulgaria, Serbia and Hungary, TV satellite dishes, books, magazines and newspapers from abroad, everything enabling the free circulation of ideas and information, not to mention the free movement of Romanian citizens.

We don't have yet sufficient and complete information about the Stalinist trial of George Craiu, YO3RF, and the ordeal of his imprisonment. We don't know the truth about the conviction of YO7DZ. I don't think amateurs are aware of the fact that in the 1987 anticommunist uprising in Brasov, two years before the revolution and the régime's collapse, a ham was among the participants. He was charged during the inquiry with "subversive communication with the West," although he was a short wave listener and possessed only a receiver! After 1989 he also faced a defamation lawsuit, because he thought he recognised a member of Parliament on the TV screen as his torturer. We don't know how many persons abandoned hope after their failed attempts to obtain a license.

To understand the past a people must become acquainted with it and finally to admit it. With no hard feelings, no resentments, but fully aware of the truth. This truth must not be silenced and buried under the dust of archives. I think it's important to be uttered, recorded and known, in order to avoid all the tragic mistakes of the history.

This text was published in the Romanian magazine Radiocommunications and Amateur Radio and on the independent website www.radioamator.ro
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HAM 'N SCHOOL BY YO9FNR

Aurel Chiruta, YO9FNR with some of the enthusiastic youngsters from the school.

A School Club Station in Romania by Aurel Chiruta, YO9FNR

YO9KVV is the call sign of the school amateur radio club in Valea Calugareasca, Prahova county, Romania.

The club is an outgrowth of the school's technical workshop for electronics and radio constructions and it was established in 1980.

At first the workshop suffered from scarce material resources and lacked a proper room. However, the children's enthusiasm convinced the school's administration to provide a dedicated space, which we set up with our own resources and the children's parents' assistance.

The first receivers we built were synchrondynes for 40 and 80 meters. In 1985 we founded a shortwave listener radio club, YO9-585/PH, which took part in many national and international contests with good results.

In 1986 the activity leader and other club members passed the examination for the amateur radio certificate, however, due to the situation in the country it was not possible to obtain the transmitter licenses as well. Nevertheless, we continued to build radio equipment and participate in contests as shortwave listeners.

We also built our first A-412 transceiver, a well-known homemade rig in Romania, designed by Nicoara Paulian, YO3NP, and built in those years in hundreds of copies by YO amateurs.

After the events of December 1989 and thanks to our newfound freedom, we finally obtained our transmitter licenses and this greatly accelerated our activity. The club room was rearranged, the antennas rebuilt and the famous A-412 put to work, this time including its transmission side, leading to more participation in contests and energizing all our activities.



New children joined the club and studied for the exams. Stefania, YO9GJY, got her license at the age of 9 years, becoming in 1994 the youngest amateur in the country and our club station's first national champion.

In 2005, after intense theory and practical preparation, 13 of our young members obtained their licenses, forming the nucleus of the club's hardcore operators.

It must be said that we received invaluable help from Romanian amateurs and from amateurs abroad. George, WB2AQC, an ex-YO, was permanently on our side. At the present time, we have 24 licensed hams and 11 shortwave listeners.

Since Valea Calugareasca is situated in a well-known wine growing region, we organized an annual marathon contest, The Road of the Wine, using the special callsign YP9VIN.

Between September 1-30 2007, 997 different stations contacted YP9VIN. For the fifth running of the contest, 160 amateurs from all over Romania gathered in our QTH, now able to meet personally after so many on-air contacts. We try to attract as many new youngsters as possible to amateur radio, the wonderful pastime that engenders better communication between people. Listen on the bands for YO9KVV and YP9VIN, QTH Valea Calugareasca, Prahova county, Romania! **Aurel Chiruta, YO9FNR**

WORK SATELLITES WITH YOUR HT!

BY K6LCS

Most hams already have the necessary equipment to work FM amateur satellites. This guide offers all the information you need to "work the birds."



If you can program split frequencies in your HT (transmit on 2 meter and receive on 440), you're set!

In satellite AO-51's main V/U mode, the UPLINK frequency (to AO-51) for voice is 145.920MHz. The DOWNLINK freq (from AO-51) is 435.300MHz.

First, you need to know WHEN and WHERE the satellite will be passing over your location. There are several commercial computer programs that will tell you. In the home office, I use Nova for Windows[1]. Outside, though, I use PocketSat[1] on my Verizon Treo 650p/755p PDA or Palm TX. On my MacBook Pro, MacDoppler[1] is amazing. These programs are easily updated with satellite tracking data. But completely free of charge info is online at...

<http://www.heavens-above.com> -or- <http://www.amsat.org>

Plug in your longitude and latitude coordinates on these sites, and you can access amateur satellite pass information. The one "absolute" for success is to open up your squelch. "Working the sats" starts off as a process of finding weak signals, so don't expect the satellite to be anywhere as strong enough to break squelch like your local repeater. Sure, it's a little noisy, but that's part of the process. Noise can also be an aid in locating the satellite because when the frequency starts to exhibit QUIETING, that's a sign that you are capturing the satellite! Improve your HT's stock antenna. For BNC connectors, Pryme's AL-800[2] will make the difference. For SMA, the Diamond SRH-320a or Smiley 270A are good performers. Using an Arrow dual-band[3] Yagi is better. If you prefer to homebrew your antenna, see the Notes[4] for construction article citations. Set up your radio so you can tune for the doppler effect. Start listening above the center frequency[5] - you will hear the satellite sooner and clearer. When the downlink gets scratchy or fuzzy, tune down 1KHz at a time, and reception should be clearer. With low power, only transmit when you can clearly hear the satellite. Follow the signal down in frequency as the pass continues.

Don't hold your whip antenna upright. Held in a vertical position, your transmitted signal is hitting land-based receivers. You need to tilt your HT's antenna so that it is perpendicular to the airborne satellite. The satellite isn't on the ground (which is what HT and vertical antennas were designed for). TILT IT about the same amount as the satellite's ELEVATION. You'll quickly get the hang of it! Ideally, we should all be working the satellites in full duplex mode, where we can simultaneously listen to the downlink as we are transmitting. Although this method is preferred, it is not mandatory: Carefully monitor the downlink, and wait for a break in the conversations to announce yourself. Many operators find using headphones helps - especially if working full duplex. Knowing your gridsquare - and having a gridsquare map - is a quick way of identifying locations of what you will be hearing. The ARRL and Icom have gridsquare maps: Icom's is free and available at better amateur radio stores[6].

The "three P's" for working amateur satellites: preparation, planning, and patience. Not every pass is workable with an HT — so don't go after the 10 degree passes. Pick your passes, working ones you know will give you the best chance.

When you hear others, try to find a break in the action, and announce your callsign phonetically, grid square, and op mode:

"KILO-SIX-LIMA-CHARLIE-SIERRA, D-M - ONE-THREE, handheld."

Some hams record their sessions for later review. Even if you don't make contacts, it helps to familiarize yourself to the callsigns, voices and personalities of the other operators.

Check the AMSAT Web site for the AO-51 Control Team News – to make sure AO-51 is in a VHF/UHF mode to work with your HT.

Ask questions! Find an elmer or look up the AMSAT[7] area coordinator for your area. Posting specific questions on the AMSAT bulletin board will also help you find answers.

Clint Bradford, K6LCS - AMSAT Area Coordinator

Email: clint@clintbradford.com 909-241-7666

Updated 07/02/08



AMSAT.ORG



**Nova for Windows
www.nlsa.com**



**MacDoppler
dogparksoftware.com**



arrowantennas.com



**PocketSat+ for Palm
www.bigfattail.com**



heavens-above.com

Notes

[1] Nova for Windows is available from Northern Lights Software Associates' Web site at www.nlsa.com. PocketSat is available from Big Fat Tail's site at www.bigfattail.com. And MacDoppler is available at www.dogparksoftware.com.

[2] The Pryme AL-800 telescopes to 34" and collapses to 10". It is packaged with a 9" rat tail - which you can use for everyday use. Use caution with this massive, heavy antenna: It has the potential of placing a lot of stress on your radio's BNC connector. Pryme claims gain figures of 3.2 dB on VHF and 5.5 dB on UHF.

[3] Arrow's Model 146/437-10WBP is a dual-band cross-Yagi design, with a duplexer built into the handle. It has three elements on 2M and 7 on 440. See it in action in the December, 2007 issue of CQ Magazine. Arrow's Web site: <http://www.arrowantennas.com>.

[4] Alex Diaz' Yagi-Uda plans are at <http://xe1mex.gq.nu/antenas/yagi.html>. The AMSAT "Cheap and Easy" series of satellite antenna articles is at...

<http://www.amsat.org/amsat-new/information/faqs/crow/>

[5] For example, here's how I have programmed my FT-60R for **A0-51**:

Ch #	Name	TX Freq	CTCSS	RX Freq	CTCSS
101	51 -2	145.920	67.0	435.310	None
102	51 -1	145.920	67.0	435.305	None
103	51 MID	145.920	67.0	435.300	None
104	51 +1	145.920	67.0	435.295	None
105	51 +2	145.920	67.0	435.290	None

And here's how I have programmed my FT-60R for **S0-50**:

Ch #	Name	TX Freq	CTCSS	RX Freq	CTCSS
201	50 -4	145.850	67.0	436.815	None
202	50 -3	145.850	67.0	436.810	None
203	50 -2	145.850	67.0	436.805	None
204	50 -1	145.850	67.0	436.800	None
205	50 74	145.850	74.4	436.795	None
206	50 MID	145.850	67.0	436.795	None
207	50 +1	145.850	67.0	436.790	None
208	50 +2	145.850	67.0	436.785	None
209	50 +3	145.850	67.0	436.780	None

[6] Icom's map is available as a .pdf file on Icom's Web site. Search their Knowledge Base for Article 5BUE54225A at <http://icomamerica.com> - or at <http://www.clintbradford.com>

[7] AMSAT deserves your support! Membership isn't that expensive, and members are entitled to discounts on AMSAT publications and satellite tracking software!

COMIC'S HAM

Have some fun



Too much wind ? Put your YL and mother-in-law on the roof !



That's why I prefer QRP !

