



MARL



Magazine by MARL

For Maltese and Gozitan

Radio Amateurs

Number 15

June 2007

## Smoking is prohibited



**at the centre**

### From the Editor

Friends,

I welcome you to another issue of this magazine for June 2007, which is the 15<sup>th</sup> edition in this series.

This is the first edition issued after a month following our last edition and if we have enough material we will try to issue this magazine every month.

You should know that as in other past years, MARL took part in the Spring Fair that is held at San Anton Gardens.

This year, the society organizing the show, the Malta Horticultural Society also gave a cup to MARL for its participation.

We thank those radio amateurs who took part in this show that was a good way so that people would become aware of our hobby and MARL.

On Saturday 19 May and Sunday 20 May, a number of MARL radio amateurs organised an operation near the Red Tower in Mellieha.

They also organized a BBQ on Saturday evening.

Although the propagation was not good, they enjoyed themselves and also got good experience just the same.

There is also the intention to organize similar activities from other places around Malta.

Therefore, we should encourage them by taking part in these activities.

This would not only be a means of contacts with other Maltese radio amateurs, but would also be a means to acquire experience of operations in different situations from those which one normally finds when working from his home.

The committee is planning to also organize activities, such as BBQ's at our Club so that the members and their families meet together in an enjoyable atmosphere.

We remind you that it is planned that the television repeater will be in place and working this month.

### Lawrence 9H1AV / 9H9MHR

#### News

As you know, some time ago Serbia and Montenegro separated and became two different countries.

The International Telecommunications Union (ITU) did not want to give a new prefix to Montenegro.

Therefore, it was necessary for them to agree on the prefix which radio amateurs would be able to use.

On 11 May they agreed that 4O, that is, 4 Oscar will be used by Montenegro.

This means that Montenegro can use from 4O0 (4 Oscar Zero) to 4O9, while Serbia will continue to use YT and YU 0 to 9.

The prefix 4N and YZ were taken back by the International Telecommunications Union (ITU) to be given to some other country when the need arises.

The International Telecommunications Union is requesting them to switch over to these prefixed as soon as possible.

Do not forget that Montenegro was already being considered as a separate

country for DXCC purposes as from last year.

### **Preparatory Conference proposals for the World Radio Conference**

#### **5 MHz**

Today I am going to continue to give you a number of countries where radio amateurs are working on this frequency.

This information is taken from the internet webpage about this frequency.

Where there is (**confirmed**) it means that this was listed on the dubious list (see last magazine) but has now been confirmed. The others are all confirmed.

**8P6** Barbados  
**9Z4** Trinidad & Tobago (**confirmed**)  
**C52** Gambja  
**CN8** Marokk (**confirmed**)  
**FS** Sint Martin (France)  
**PJ7** Sint Martin N'lands (**confirmed**)  
**PT7** Brazil  
**S92** Sao Tome & Principe  
**SV** Grece (**confirmed**)  
**T77** San Marino  
**V44** St Kitts & Nevis  
**WP4** USA Islands (Caribbean)  
**YU** Yugoslavja (**confirmed**)

Whoever hears any new stations please notify me and also notify Min jisma xi stazzjonijiet godda jgharrafni K4MM on his e-mail [dxer@bellsouth.net](mailto:dxer@bellsouth.net)

Flash news to W8GEX on his e-mail [w8gex@aol.com](mailto:w8gex@aol.com)

To seen the latest country list where their radio amateurs are allowed to operate on this frequency go to <http://60meters.info/countries.html>

#### **500 kHz**

Today we have news tahtthe third German station is also on the 500 kHz Frequency.

This is Uwe, DJ8WX and his experimental licence is DI2BE.

He is working on a frequency of 505.1095 kHz and his calculated ERP is 9 Watts.

### **Maltese radio amateurs on 14 MHz**

For those who are interested in talking with other Maltese radio amateurs, every Friday a number of Maltese radio amateurs from Malta and other countries meet every Friday.

The meet on 14.297 MHz, at 1700 UTC.

Every morning, during the day as well as in the evening a number of Maltese radio amateurs from Malta, England, Australia and the USA also meet on R6.

The R6 repeater is connected to the internet with the echolink system.

The other repeater on UHF, output on 433.175MHz and input on 433.775MHz is also connected to the internet system with echolink. This requires a CTCSS tone to be accessed.

This is also used, although perhaps not as much as R6, but if you call on it you will probably always find someone to answer you.

Do not forget that the more frequencies we use and the more we use them the more we safeguard our frequencies.

**Lawrence**  
**9H1AV / 9H9MHR**

### **Links**

#### **HAARP**

High Frequency Active Auroral Research Programme  
<http://www.haarp.alaska.edu/haarp/index.html>

Have a look at this webpage and see the dream of radio amateurs regarding the tx and the antenna.

## 28 MHz

Since the 10-metre band or 28 MHz frequency is frequently being open, there may be some who would want to listen to see the propagation conditions.

The following is a link to the **10-10 International** Organisation from where you can download beacon frequencies which are used as propagation indicators.

<http://www.ten-ten.org/main.html>

## ULF – VLF Signals

What signals are there between 0.6 Hz to 30 kHz?

What receivers can you make to receive signals on these frequencies?

What computer programmes can you use to receive signals?

What antennas can you make?

For these and other questions I am going to give you a list of internet webpages which you should find interesting.

Wolf's spectrum program webpage:  
<http://www.qsl.net/dl4yhf> as well as  
[www.members.aol.com/dl4yhf](http://www.members.aol.com/dl4yhf)

Wolf's own article " Using a PC with soundcard, as a VLF receiver" at:  
[http://www.qsl.net/dl4yhf/vlf\\_rcvr.html](http://www.qsl.net/dl4yhf/vlf_rcvr.html)

The RDF Project. Radio Direction Finding of VLF and LF transmissions  
[http://www-user.uni-bremen.de/~ews2/RDF\\_project.htm](http://www-user.uni-bremen.de/~ews2/RDF_project.htm)

Klaus' Radio Page  
<http://longwave.bei.t-online.de/>

A very useful RDF calculator from Klaus  
<http://longwave.bei.t-online.de/rdf.html>

The world below 535kHz, by Costas Krallis SV1XV  
<http://www.qsl.net/sv1xv/index.html>

LWCA, Longwave Club of America,  
<http://lwca.org>

Tony Field's azimuth map v3.2  
<http://members.shaw.ca/ve6yp/>  
mirror at: <http://www.qsl.net/ve6yp/>

Sheldon C. Shallon's (W6EL) propagation and azimuth map program, W6ELProp v2.02. or more recent. The map is very useful for building up a library of VLF bearings: <http://www.qsl.net/w6elprop/>

Mother Nature's own cacophony of signals and noise in the VLF range from Stephen P. McGreevy:  
<http://www-pw.physics.uiowa.edu/mcgreevy/>

NASA's online VLF receiver:  
<http://spaceweather.com/glossary/inspire.html>  
[http://science.nasa.gov/headlines/y2001/as19jan\\_1.htm](http://science.nasa.gov/headlines/y2001/as19jan_1.htm)

Larry's VLF site, sounds, schematics and much more: <http://home.pon.net/785/>

OPEN LAB, Radio below 22 kHz, Renato Romero's very interesting site, for experimentation, research and information, in the ELF and VLF frequency range: <http://www.vlf.it>

The use of Frequency Selective Voltmeters as VLF receivers, by Don Moman:  
<http://members.home.net/rnewll/fsvm.htm>

For construction of ground dipoles:  
<http://www.elfrad.com>  
<http://www.elfrad.org>  
<http://www.da4e.nl/elfspecial.html>

For construction of induction coil antennas and ELF receivers:  
<http://wavelab.homestead.com/>

For various ELF /ULF research, including spectrograms of the 2.5 Hz signal:  
[http://members.home.net/sidereal7/elfulf\\_research\\_in\\_arizona.htm](http://members.home.net/sidereal7/elfulf_research_in_arizona.htm)

Loop antennas for VLF and below:  
<http://home.t-online.de/home/Peter.Schmalkoke/>

Maps and coordinates, worldwide:  
<http://www.calle.com/world>  
<http://new2calle.com/world>

WUN Page where you can find a lot of information including a list of ULF-ELF stations:  
<http://www.wunclub.com>

### Questions

Following the last article about the use of radio in vehicles and about the notice that is sent about an alleged contravention there were some who asked about the Board of Appeals.

This is because of the great amount of notices about alleged contraventions being sent trivially a Board was established where one can write, explains his position, and asks for the procedures against him to be stopped.

The Board address is,  
Bord tal-Petizzjonijiet  
P.O. Box 41  
Valletta

Whoever writes should give a short description of the facts and state what he is requesting.

To take a practical example, let's say that someone had received a notice by post to pay a fine because he had entered a one-way street wrong way.

Let's say that in the notice there was also a photo of the car with the time and date when the alleged act was committed and that this photo was taken by an automatic camera.

He looks at the vehicle in the photo and sees that this is really his vehicle and not some other vehicle that mistakenly his number appears on it as has sometimes happened. Let's say he finds that everything tallies.

He looks at the date of when the alleged act took place according to the notice and also according to the photo and finds that they tally.

He looks at the date on the post office stamp on the notice envelope and finds that the post date is 4 days after the alleged act was committed.

This means that the notice was not sent within two days as required by law and this is therefore the first point that makes the notice null and void.  
**(See Legal notice 350 of 2004 Article 3(2))**

Apart from this he notices that in the notice there is no reason or reasons why he was not served with the notice by hand at the time of the alleged act or omission.

It may happen that some may think that because the photo was taken by an automatic camera and there was no one to serve the notice by hand at the time of the alleged act or omission there is no need to state this reason.

This is no excuse for the law.

Download the Regulation mentioned in Magazine number 13, or rather Legal Notice 350 of 2004 and you will see that you have to be given the reason why the notice was not served by hand at the time when the alleged act or omission was committed. **(see Article 3(1) of Legal Notice 350 of 2004)**

There is no exception to this rule.

The Regulation also gives the specific situations where the notice may be sent by post **(see Article 3(3) of Legal Notice 350 of 2004)** but the reason why the notice was not served at the time must be given just the same.

Since no reason was given the notice in this case is also null and void also on this point.

Now I am going to give you a typical letter that can be sent in this situation.

Mr/Ms (name of person writing)  
Address....

Lill-Board għall-Petizzjonijiet  
P.O. Box 41,  
Valletta.

Date.....

I refer to the notice from the (locality) Local Council about a contravention that allegedly was made by a car (make, model and number of car) registered in my name, which contravention was allegedly made on 8 February 2007. A copy of this notice is hereto attached.

Since the fine was not paid I also received a notice to appear before the Commissioner for Justice, (locality), on 27 May 2007. A copy of this notice is hereto attached.

I bring to your attention that while according to the first notice the act was allegedly committed on 8 May, the first notice was sent on 12 February as is clear from the postage stamp date on the envelope a copy of which is hereto attached.

I bring to your attention that according to Legal Notice 350 of 2004 that forms part of the Traffic Regulations, the notice should be served by hand or if not so served is sent not later than two days after the alleged act or omission is committed. The first notice should therefor have been sent not later than 10 February.

Apart from this, the reason why the notice was not served by hand must also be given. This was also not stated. A copy of the Legal Notice is hereto attached for your convenience

From this it is clear that the first notice was prescribed, null and void and therefore neither the second notice could or should have been sent.

Therefore, I respectfully request that all the notices be cancelled because of the nullity of the first notice.

Signature and ID card number.

Do not forget that such a letter should be sent REGISTERED

I hope that I have cleared what one should do in such cases.

**Lawrence 9H1AV / 9H9MHR**

## **SoftRock**

Last time there were some who asked from where one can acquire further information about SoftRock.

I am therefore going to give you some internet webpages addresses from where you can acquire more information about this project.

Softrock 40

<http://www.amqrp.org/kits/softrock40/>

Full Instructions

<http://ewjt.com/kd5tfd/sdr1k-notebook/sr40/sw.html>

Writeup

<http://ewjt.com/kd5tfd/sdr1k-notebook/sr40/install-post.html>

Downloads

<http://support.flex-radio.com/Downloads.aspx>

You can also go to the ARRL internet webpage and there you will also find information about how radios and transceivers work with computer programmes.

## **Dx-pedition Webpage**

If you have talked to a dxpedition and you want to know if you are listed in their contacts, there are many different dx-peditions logs on this webpage.

[http://logsearch.de/index.php?option=com\\_wrapper&Itemid=73](http://logsearch.de/index.php?option=com_wrapper&Itemid=73)

When the webpage loads up look for the relevant dx-pedition and search its log.

**Electrical Safety First !**  
**Part 2**

By Dominic Azzopardi 9H1M  
 Tech.Eng.IEEE 8070422/4648

**Double Insulation**

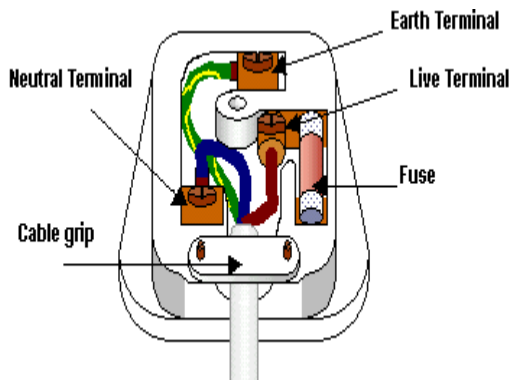
Certain appliances do not need earthing. Totally plastic cased equipment, for example, where there are no exposed metal parts or framework and certain items which, although having exposed metal parts, are said to be *double-insulated*.

Here, because of additional insulation, it is quite impossible for a detached wire (conductor) to come in contact with such exposed metalwork whatever the fault. It is then possible to dispense with the earth conductor. This is common practice with certain DIY type tools.

**The Mains Plug**

The correct wiring of a 3-pin 13A UK plug is shown below in Fig1. Fig2 shows a photo of such plug and Table 2 shows the old and new wiring colour code. By now all equipment should use the new colour code.

Obviously, equipment that does not require an earth connection has only 2 conductors (the Live and Neutral) and in this case the earth connection is ignored.



**Fig. 1 ~ Wiring of the 13A Plug**



**Fig 2 ~ The 13Amp UK Plug BS1363**

**Table 2:**

<i>Conductor</i>	<i>New System</i>	<i>Old System</i>
<b>Live</b>	<b>Brown</b>	<b>Red</b>
<b>Neutral</b>	<b>Blue</b>	<b>Black</b>
<b>Earth</b>	<b>Green/Yellow</b>	<b>Green</b>

**Extract from IEE regulations Guide**

Δ British Standard **BS 1363** specifies the type of domestic AC power plugs and sockets most commonly used in the United Kingdom, Ireland, and many former British colonies.

In these countries, the system is colloquially also known as the **13 amp plug/socket**.

A BS 1363 plug has two horizontal, rectangular pins for phase (commonly termed 'live') and neutral, and above these pins, a larger, vertical pin for an earth connection.

Unlike with most other types of sockets, the earth pin is mandatory in the BS 1363 plug, as it is needed to open a shutter in the socket. It also polarizes the plug. Moulded plugs for unearthed, double-



insulated appliances may substitute this contact with a plastic pin.

Virtually all non-fixed domestic equipment is connected using the BS1363 plugs, the main exceptions being equipment requiring more than 13 amperes (e.g. larger electric cookers, which are hard-wired), and remotely switched, non-fixed lighting (which use proprietary or BS546 plugs).

Because typical British circuits (especially ring circuits) can deliver much more power than an appliance flex (power cord) can safely handle, these plugs are required to carry a cartridge fuse. The fuse is manufactured to BS 1362 and is normally rated at 3, 5, 10 or 13 amperes.

The maximum load that can be placed on a socket is 13 A; triple and larger sockets are fitted with a 13 A fuse of the same type used in the plugs. The plugs and sockets are designed to carry up to 250 volts AC, 50 hertz.

This plug is often described as the safest in the world and to many outsiders it often seems excessively safety conscious and somewhat cumbersome.

The high extraction force can be inconvenient, particularly for people with weak hands, such as the elderly.

To counter this, plugs with handles, and straps to provide existing plugs with a handle, have been produced but have not been popular.

In addition, most wall sockets have built in switches, reducing the need for plug removal when power is not required.

The large size can make the plugs inconvenient when there are many plugs in a small space, as on power strips.

On the other hand the side entry flex (cable) gives the combination of plug and flush socket a low profile to the wall (which is useful if plugging something in behind a cupboard, for example). Δ

### Points to note when wiring a plug

- The wires should be connected to the correct terminals.
- Only the right amount of insulation should be removed from the wires.
- When stripping the insulation, no strands of copper should be lost.
- The cable should be securely gripped on the outer sheath. It must withstand a substantial accidental pull.
- The correct value of the fuse must be fitted.

### Safety measures

- 1 Fusing
- 2 Shuttering
- 3 Pin insulation
- 4 Dimensions
- 5 Cord Grip

As we previously mentioned, cartridge fuses BS 1362 are commonly found in values from 3A to 13A. A simple way to calculate the correct fuse for equipment is by dividing the power rating by 230.

### Example

For a portable electric heater with a power consumption of 1Kw (1000w) the current taken would be  $1000/230 = 4.35A$ , Therefore, for this case a 5A fuse would be suitable.

One should however remember that a fuse that is rated at e.g. 5A does not mean that it blows (melts) when a current of 5A passes through but it means that it is suitable up to a current of 5A continuous use.

The reason for this is the Fusing factor. Such cartridge fuse has a fusing factor of 1.5, meaning that the rated current (5A) multiplied by a fusing factor of 1.5 becoming 7.5A ~ this is the melting/blowing point for this fuse.

However on the other hand one should take in consideration that inductive loads such as electric drillers, motors, fluorescent lighting and similar equipment induce larger starting currents.



In this situation, as a good measure we double the fuse rating to prevent the fuse from blowing prematurely.

*In the next issue we will deal with switching, safety precautions and isolation.*

### To combine PDF Documents

One can have a number of separate documents and wishes to combine them in one document.

When these are in pdf a problem is created because you will have to copy them bit by bit and then make them as a single pdf document.

Today I have an internet address from where you can download a programme to combine a number of pdf documents.

This programme has a 15-day evaluation period and if you want it you can but it..

The webpage from where you can download it is  
<http://home.hccnet.nl/s.vd.palen/>

Space due to difference in text translation

### Measurements

Today I am going to continue to give you the antenna measurements for the next frequency bands.

**The first column is the frequency.**  
**The second column is the wavelength in metres.**

**The third column is the length of a quarter-wave in feet and inches.**

**The last column is the length of a half-wave in feet and inches.**

The allocation on 50 MHz is between 50.0 MHz – 52.0 Mhz. Due to the small measurements, I am going to give them in inches.

F MHz	M	1/4W	1/2W
50.0	6	56.16"	112.32"
50.05	5.99	56.1"	112.2"
50.1	5.998	56.04"	112.09"
50.15	5.982	55.99"	111.98"
50.2	5.976	55.93"	111.87"
50.25	5.97	55.88"	111.76"
50.3	5.964	55.82"	111.65"
50.35	5.958	55.77"	111.54"
50.4	5.952	55.71"	111.42"
50.45	5.946	55.66"	111.32"
50.5	5.94	55.6"	111.2"
50.55	5.935	55.55"	111.1"
50.6	5.929	55.49"	110.99"
50.65	5.923	55.44"	110.88"
50.7	5.917	55.38"	110.76"
50.75	5.911	55.33"	110.66"
50.8	5.906	55.27"	110.55"
50.85	5.9	55.22"	110.44"
50.9	5.894	55.16"	110.33"
50.95	5.888	55.11"	110.22"
51	5.882	55.06"	110.12"
51.05	5.877	55"	110"
51.1	5.871	54.95"	109.9"
51.15	5.865	54.89"	109.8"
51.2	5.86	54.84"	109.68"
51.25	5.854	54.79"	109.58"
51.3	5.848	54.73"	109.47"
51.35	5.842	54.68"	109.36"
51.4	5.837	54.63"	109.26"
51.45	5.831	54.57"	109.15"
51.5	5.825	54.52"	109.04"
51.55	5.82	54.47"	108.94"
51.6	5.814	54.41"	108.83"
51.65	5.808	54.36"	108.73"
51.7	5.803	54.31"	108.62"
51.75	5.797	54.26"	108.52"
51.8	5.792	54.2"	108.4"
51.85	5.786	54.15"	108.31"
51.9	5.78	54.1"	108.2"
51.95	5.775	54.05"	108.1"

Note that the difference between the band limits is a little more than 2 inches in a quarter wave and a little more than 4 inches in a half wave.

This shows how careful you have to be for measurements and the fact that you have to tune the antenna in its place for that part of the band you want to work on for lowest swr.

The allocation on 70 MHz is between 10MHz and 70.5MHz and I am going to give it in inches because as you can see the measurements are small.

F MHz	M	1/4W	1/2W
70.05	4.283	40.08"	80.17"
70.1	4.28	40.05"	80.11"
70.15	4.277	40.02"	80.05"
70.2	4.274	39.99"	79.99"
70.25	4.27	39.97"	79.94"
70.3	4.267	39.94"	79.88"
70.35	4.264	39.91"	79.82"
70.4	4.26	39.88"	79.77"
70.45	4.258	39.85	79.71"

Note that between the band limits there is less than a quarter inch in a quarter wave and less than half an inch in a half wave.

However, this band is only 500kHz wide and therefore it will not make much difference between one end and the other, but you always have to tune the antenna in its place if possible for best swr.

The allocation on 144 MHz is between 144 MHz and 146 MHz. Since the measurements on this band are also small, I am also going to give them in inches.

FMHz	M	1/4W	1/2W
144.1	2.081	19.48"	38.97"
144.2	2.08	19.47"	38.94"
144.3	2.079	19.45"	38.91"
144.4	2.077	19.48"	38.97"
144.5	2.076	19.43"	38.86"
144.6	2.074	19.41"	38.83"
144.7	2.073	19.4"	38.81"
144.8	2.071	19.39"	38.78"
144.9	2.07	19.37"	38.75"
145	2.068	19.36"	38.73"
145.1	2.067	19.35"	38.7"
145.2	2.066	19.33"	38.67"
145.3	2.064	19.32"	38.65"
145.4	2.063	19.31"	38.62"
145.5	2.061	19.29"	38.59"
145.6	2.06	19.28"	38.57"
145.7	2.059	19.27"	38.54"

145.8	2.057	19.25"	38.51"
145.9	2.056	19.24"	38.49"

Note that the difference in a quarter wave is less from one end of the band to the other on this frequency is less than a quarter inch and less than half an inch in a half wave.

This means that you have to be very careful in measurements, and you have to tune the antenna on the frequency in place for best swr.

I hope that you find this information useful and at least you will have an idea about the measurements that you have to start with to make an antenna for a particular frequency.

I want to bring to your attention that these measurements are for when you use a small diameter wire when compared to its length.

When, therefore, you use tubes for the antenna, because they will be thicker when compared to their length, the measurements will normally be less than those shown in these tables.

But what you have to remember is that you can cut from a wire or tube which is long, but it is more difficult to add.

When, therefore, you are tuning the antenna be very careful especially on vhf frequencies.

What you can do is use different diameter tubes and vary their length by sliding them in or out of each other to tune the antenna.

### Lawrence 9H1AV / 9H9MHR

**599?**

The basis for a formal QSO is the exchange of accurate signal reports between the stations.

By convention, this requires reporting "readability (R)", "strength (S)" and "tone (T)" or "quality (Q)".

R can be between 1 and 5, S between 1 and 9, T (or Q) between 1 and 9.

Much discussion about reporting can be found in Ham radio books and magazines.

However, listening to other hams on the air these days, it seems that this is not a serious exercise, since it is rare to hear a report other than 599.

How can anyone honestly report 599 (perfect readability, strong signal and good tone) and in the same phrase request a retransmission of the operator's name and QTH?

Maybe it is the fault of the software used for logging, which may default to 599?

Even more questionable is the use of 5NN (instead of 599) presumably used to speed up transmission, since the letter N is faster to send than the figure 9.

I strongly suspect that today's RSQ information is mostly used to send a report which the sender believes the other station wants to receive, rather than the reality. If so, this could well be a disservice rather than a help.

For myself, I always have difficulty deciding on the value to give for R.

If the message is coded, actually sent incorrectly, or in a foreign language, how can we decide if it is readable?

Should we not really report how "certain" we are that we heard the signal correctly?

As an exercise, how would you report the following text if you received it and are fairly sure that your copy is accurate?

R3 because at first glance it is incorrect, or R5 after re-reading it (assuming you are an English speaking person)?

Accdrnig to a rscheearch at Cmabrigde Uinervtisy, it deosn't mttar in waht oredr the ltteers in a wrod are, the olny iprmoetnt tihng is taht the frist and lsat ltteer be at the rghit pclae. The rset can be

a total mses and you can sitll raed it wouthit porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe.

**Robin 9H1ZZ**

**Note**

Regarding this article, I have brought Robin's attention to the following points.

Radio amateurs cannot use codified messages, and therefore either the operator who sent (or received) the message is a lid.

That during the Radio Officer's course it was always emphasised and I have always learned, and experience bear this out, that you have to copy exactly and not to change anything.

This is because, e.g. if you are sending (or receiving) a message from a doctor and you do not understand chemical or medical terminology and "correct" the message to make sense to "you", you may even lead to someone's death if he is given the wrong cure or medicine.

I have learned the same things during my legal studies, namely, that you have to be veryu careful, because legally, even where a comma or fullstop is put makes a big difference that could alter the sense of the sentence or paragraph.

Therefore, if you receive something which you do not know if you have received it correctly, ask the sender to confirm that which you have a doubt about.

Robin's article is a good reflection of what anyone hears whenever he goes on the air and raises interesting questions.

It is a good exercise to carry out. Try to read the last paragraph quickly without trying to examine the words one by one and you will see that the research carried out by Cambridge University is valid.

**Lawrence 9H1AV / 9H9MHR**

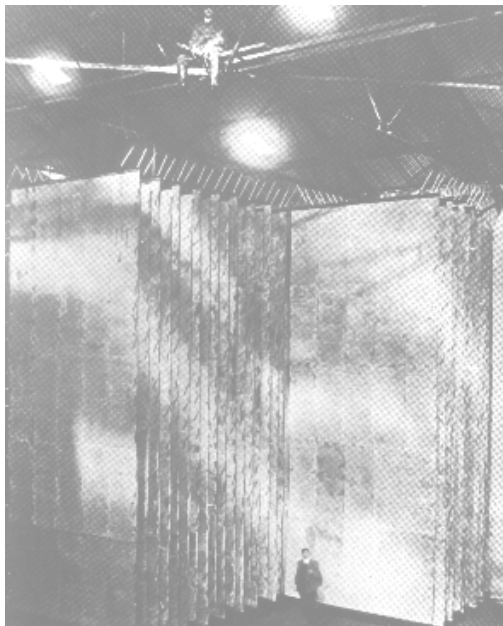
## Antenna tal-Holm

Space due to difference in text translation

The antenna that Marconi was going to use for his trans-Atlantic experiments was big. However, the supporting 200-foot poles were not strong enough and it fell down during a gale in September 1901.

Since Marconi wanted to continue his experiments, the antenna shown hereunder was constructed.

## Marconi style Condenser



This photo was taken at Clifden, Ireland, and shows the building of a condenser. (photo Marconi Company)

Notice the man at the bottom of the photo.

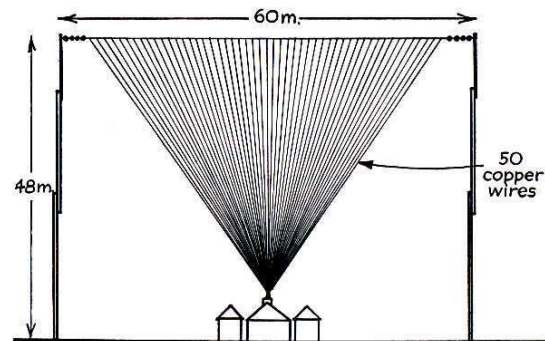
This condenser was made up of thousands of steel plates hanging between the ceiling and the floor.

Some details:

HT 15,000 Volts DC (3 generators 5Kv in series) driven by a steam engine.

Stand-by batteries, 6,000 batteries, 2V, 30AH in series.

Not exactly to take them with you for portable operation.



I think that those who work on 160 metres dream about this antenna.

## Another link

If you are interested in home construction this is a link that I am certain you will find interesting.

<http://www.amqrp.org/index.html>

## MARL ACTIVITIES

**More portable operations from different places are going to be organised so that the participants would be trained to also operate under abnormal conditions.**

**We encourage you to participate and acquire experience which you never know when you may need.**

**We also heard at the Club that George is also thinking of organising a number of BBQs for the coming summer.**

**We are sure that our members will encourage him by their attendance.**

**See you.**