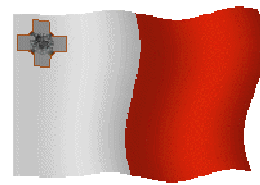


MARL



MALTA



Magazine by MARL

For Maltese and Gozitan
Radio Amateurs

Number 61

April 2011



Smoking is prohibited at the Centre

From the Editor

Friends,

I welcome you to another issue of this magazine for April 2011, which is issue 61 of this series.

The Extraordinary General Meeting that was held on Sunday 20 March at 10.00 a.m. at the **MARL** Centre agreed on a number of amendments for the **MARL** Statute. The amended Statute will be published later, both on the **MARL** webpage as well as in this Magazine.

I also remind you that **MARL** is going to take part in the Spring Fair that is going to be held at San Anton Gardens on Saturday and Sunday **14 - 15 May, 2011**.

You also have information on the **500 kHz** frequency since the number of countries that are giving an allocation to their radio amateurs on it is always increasing and we hope that we will also be given an allocation on this frequency even temporarily and not necessarily in a general manner but whoever is interested may apply for it.

We congratulate **Joe 9H1VW** and **Mansueto 9H1GB** who are always continuing with experiments on **10 GHz**. They continued with their experiments on Sunday 3 April and notwithstanding that Joe did not have his antenna aligned on Mansueto, he was 59+ just the same and he was using a 2 Watt amplifier.

These are all interesting experiments, that I hope more people will participate in, as are all experiments on all frequencies and modes of transmission that we radio amateurs can use and experiment on.

Today I have started giving you information on electrical plugs that are used in different countries so that if you go abroad and take some equipment with you, you will know what plugs you need to fit or what adaptors to buy.

Later on I am going to continue to give you further information on these plugs, both those that are attached to equipment as well as wall sockets together with the voltage that one finds in the different countries as well as the frequency that nowadays is either **50 Hz** or **60 Hz**.

Before closing I wish to bring to your attention that [Searchmalta](#) with which I had my e-mail is going to close down at the end of May and therefore my previous e-mail that was 9h1av at searchmalta dot com will not remain valid and my new e-mail is 9h1avLaw at gmail dot com

As always, I hope that you find the information in the magazine useful to you and if you have some article please leave it in my **QSL** box or you can send it to me on my e-mail **9h1avLaw at gmail dot com**.

Lawrence

9H1AV/9H9MHR/9H79AV

Frequencies in the Libyan issue

As you know presently there are military operations on Libya. As radio amateurs and also those who like to listen on the radio, or as we call them, listeners, I think that you will be interested to know what frequencies are being used during these operations.

Thanks to Paul Debono who sent an e-mail with links for this information. Here you have the information as well as those links so that if the information changes you will know if you access them.

<http://www.radioaficion.com/HamNews/articles/3641-libya-frequencies.html>

<http://bryanherbert.com/>

19.03.2011

4169 kHz	–	Several players over No-Fly Zone
4196 kHz	–	Several players w/ NCS over No-Fly Zone
5368 kHz	–	Libyan GMMRA ALE Network
6688 kHz	–	French Air Force ‘Very Busy’
6690 kHz	–	Several players over No-Fly Zone
6712 kHz	–	Mixed Use; Several Players
6761 kHz	–	Global Aerial Refueling Operations
6877 kHz	–	Reported PsyOps; possibly from Commando Solo III
6884 kHz	–	Libyan GMMRA ALE Network
9375 kHz	–	Libyan GMMRA ALE Network
10125 kHz	–	Libyan GMMRA ALE Network
10404 kHz	–	Libyan GMMRA ALE Network

21.03.2011

4196.0 kHz	-	NATO Awacs activity USB Callsign Magic ##/NATO##
6688.0 kHz	–	French strategic Air Force Net – Commandant Des Forces Aériennes Stratégiques (CFAS) USB Callsign Capitol
6712.0 kHz	-	French Air Force Commandement De La Forces Aériennes De Projection (CFAP) USB Callsign Circus Verte
6761.0 kHz	-	USAF Global refuelling Operations USB
6877.0 kHz	-	USAF Psyop transmissions against Libyan Navy + jamming
9031.0 kHz	-	UK RAF TASCOTT USB Ops message
10.315 kHz	-	DHN 66 NATO Geilenkirchen GER E-3 AWACS/Magic to DHN66 link USB
12.311 kHz	-	French Air Force Centre De Conduite Des Opérations Aériennes (CCOA) USB Callsign Veilleur

Libyan GMMRA HF ALE network still active 5368.0, 6884.0, 8200.0, 9375.0, 10.125.0, 10.404 look for the MOBILE ## and HQ1 ALE Addresses

Here is a link to an MP3 on jamming on 6877.0 kHz as well as a message to Libyan sailors not to leave port etc.

http://www.mediasuk.org/appoggio/jamming_6877.mp3

Nils, DK8OK also put an audio copy of a warning on 6877.0 kHz, 20.03.2011, 9.00 UTC, reduced carrier. Some jamming, a warning to Libyan sailors to get back into port and leave their ships in Arabic, English and French.

http://web.me.com/nils.schiffhauer/Website/Monitoring/Eintr%C3%A4ge/2011/2/26_Audio_Video_-_Utility_files/6877%20PsyOP%20NATO%200900.mp3

I hope that you find these frequencies interesting and if there is anyone who knows about other frequencies please inform me so that I can put them in this magazine.

Lawrence

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Spring Show

I remind **MARL** members that as in past years **MARL** is going to take part in the **Spring Show** at the **San Anton Gardens on Saturday and Sunday 14 – 15 May, 2011**.

Whoever wants to participate should inform the Secretary as soon as possible and advise him about your availability so that the Secretary can coordinate all the work.

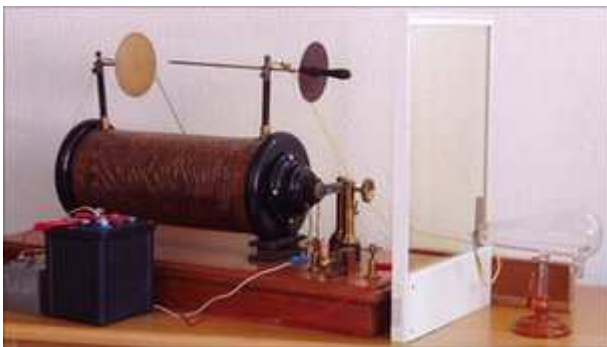
This is an opportunity for one to participate to continue showing our hobby to the public as well as for together with the family to be able to see and enjoy the show which was always good and beautiful and at the same time will be able to enjoy his/her hobby.

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An X-ray machine from 1896

An X-ray machine that was built in 1896 only a year after X-rays were discovered, has lately been operated in The Netherlands. This was developed by the High School Director H J Hoffmans and the Director of a local Hospital Lambertus Theodorus van Kleef from Maastricht, The Netherlands.



A few weeks after Wilhelm Roentgen had discovered X-rays, they built this machine from parts they had found in the same school to experiment with anatomical photos. This machine had ended up in a store in Maastricht and was forgotten and was again discovered last year for a television history programme.

Following this, Doctor Gerrit Kemerink from the University of Maastricht Medical Centre decided to compare this equipment with modern X-ray equipment. He said that as far as he knows no one had made systematic measurements on this equipment because until one had the necessary equipment to do so, these systems were changed with more sophisticated ones.

Within one year from Roentgen's discovery of X-rays it was known that exposure to these rays for extended periods were harmful. Therefore, since the levels of radiation were going to be high, they used this equipment on the hand of a cadaver instead of on a young lady as was written in Hoffman and van Kleef's notes.



When they used a modern negative they found out that a radiation dose of 10 times that of modern equipment was needed from the old equipment. When they used a negative as had been used by Hoffman and van Kleef, they found that the radiation needed from the old machine was 1,500 times more than needed by the modern ones.

Apart from this, the X-rays from the old machine were dispersed and not focused and therefore the image was not as clear as those taken today. They were however satisfied that they had succeeded in making this machine work.

They said that "Our experience with this machine, which had a buzzing interruptor, crackling lightning within a spark gap, and a greenish light flashing in a tube, which spread the smell of ozone and which revealed internal structures in the human body was, even today, little less than magical,"

The two photos that you have with this article show the machine as well as photos taken with the old machine and with a modern one. When you consider how old the old machine is, you appreciate that it was something new that one could look at the inside of the human body and how clear it was at the time and appreciate how modern was its development for that time.

One can see this article that was on the BBC website at <http://www.bbc.co.uk/news/science-environment-12745194> while a report on this research is found on the radiology journal <http://radiology.rsna.org/>

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Below 9 kHz

Today you have a webpage dedicated to frequencies below 9 kHz.

<https://sites.google.com/site/sub9khz/>

grabbers

http://www.iup.uni-heidelberg.de/schaefer_vlf/DK7FC_VLF_Grabber.html

8.97 kHz

http://www.iup.uni-heidelberg.de/schaefer_vlf/DK7FC_VLF_Grabber2.html

6.4 kHz + ULF

http://www.iup.uni-heidelberg.de/schaefer_vlf/DK7FC_LF_Grabber.html

137 kHz

http://www.iup.uni-heidelberg.de/schaefer_vlf/DK7FC_LF_DX_Grabber.html

Very slow modes

<http://abelian.org/vlf/spectrum.shtml>

VLF Spectrum

<http://abelian.org/vlf/>
Live VLF Natural Radio

<http://dxworld.com/60mlog.html>
5 MHz Logger

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5 MHz

In Luxembourg there is a radio beacon on the frequency of **5205.25 kHz**. This beacon's call sign is **LX0HF**. This means that Luxembourg has moved another step forward for their radio amateurs to be given an allocation on this frequency as had been given by other countries.

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70 MHz

These are the latest news on this frequency.

According to the **Polski Club UKF** <http://www.pk-ukf.org.pl/news.php> **Poland** are expecting that in a few months they will be granted a permanent allocation on this frequency. There was some delay because there is a total restructuring on all frequencies and the necessary changes need to be made in the law.

According to **V51PJ, Pieter, Namibia** joined the countries that have given an allocation to their radio amateurs on this frequency. The license conditions are the same as those of South Africa. These are **70.000 MHz – 70.300 MHz, 400 W SSB/CW between 70.000 MHz – 70.200 MHz**.

Pieter has already worked South Africa several times, both on meteor scatter as well as on tropo.

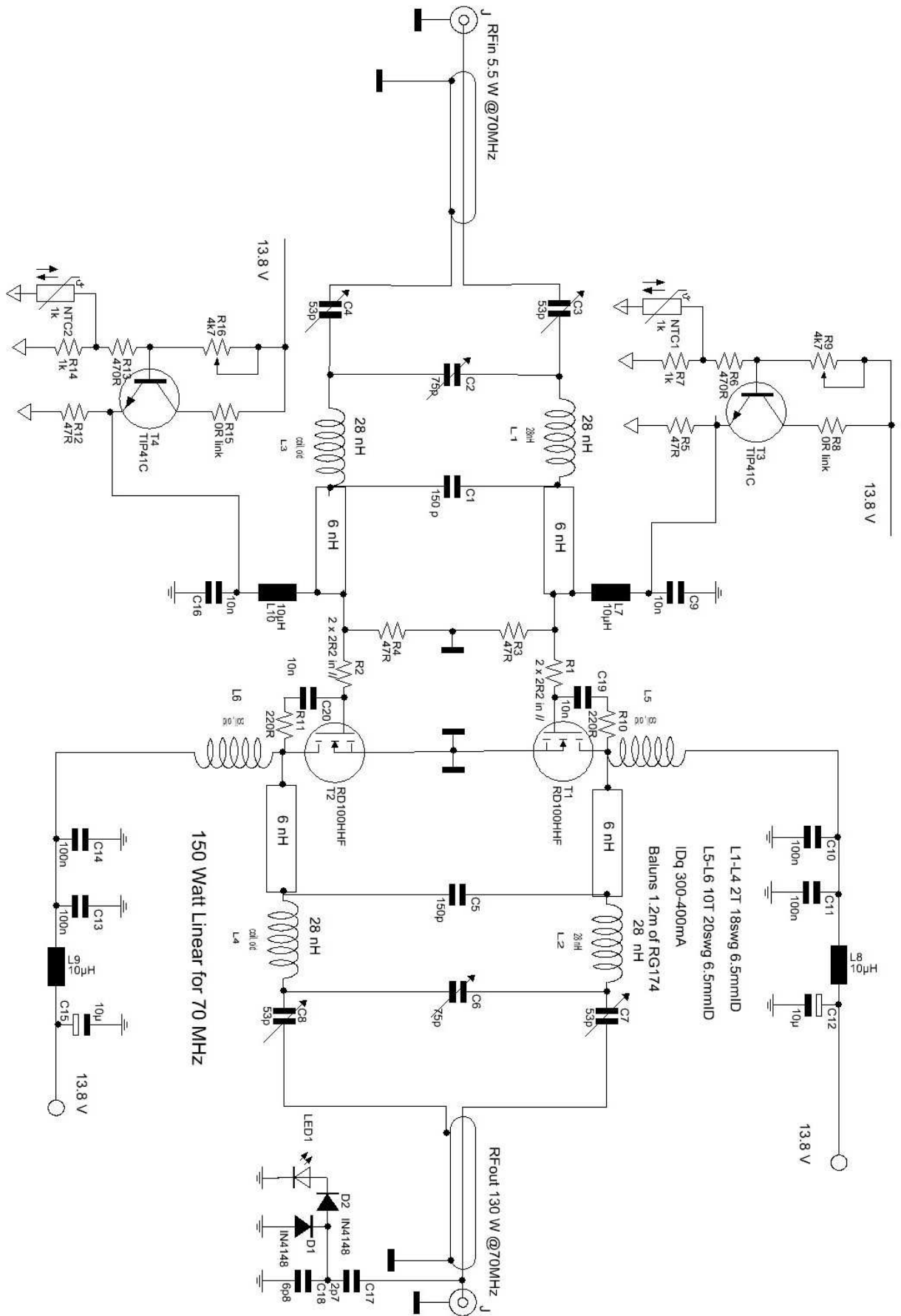
First TEP QOS between Greece and South Africa

Leo, SV2DCD and Willem, ZS6WAB became the first two radio amateurs that have made a contact with a means of propagation known as **TEP**, that is, trans-equatorial propagation. One can see and hear this contact on youtube <http://www.youtube.com/watch?v=LmYZtQifI6M>

This contact was made on **28 March 2011, 1754 UTC** on **SSB** and signal reports were **52/53 and the frequency was 70.2 MHz**.

And in Malta we are still waiting. But while we are waiting, here you have a circuit of a 130 Watt amplifier for this frequency. This uses Mosfets type RD100HF, works on a voltage of 13.8V and all it needs is an input of 5.5 Watts.

Whoever wants to can get ready to be able to transmit later on if and when we are given permission to use this frequency. Although some components are not clear because the size has been reduced to fit in this magazine, you can copy it on a word document and enlarge it as much as you want.



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Internet webpages

This is an interesting webpage from the Bell laboratories which has links to the Bell Laboratories Magazine that go back to the year 1922 and are up to 1982. These are really interesting publications that show the developments that were being made in the radio, telephony, television, transmission lines and other connected sectors.

You can download every magazine, save it on your computer and see it later on. Don't fail to see it because it is really a mine of information.

<http://www.alcatel-lucent.com/bstj/>

Bell System Technical Journal, 1922-1983

Other interesting pages

<http://www.k3pgp.org/>

<http://aladal.net/toast/detector.html>

<http://f1avyopto.wifeo.com/>

http://www.modulatedlight.org/optical_comms/optical_rx1.html

<http://ka7oei.com/>

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Electrical plugs and sockets

Many radio amateurs including Maltese ones go to other countries for a holiday and take their radio equipment with them. A problem that they may have is that the plugs and sockets used in Malta are different from those found in other countries.

Therefore, today I am going to start giving you information on the different plugs and sockets as well as the countries that use them. Later on I will give you the voltages that one finds in different countries around the world together with other details such as the frequency, which nowadays there is not much difference because it is either **50 Hz** or **60 Hz**.

Type A



This plug has flat pins and is used mostly in North America, in the Eastern coast countries of South America, as well as some Asian countries. This plug is normally used in equipment that does not take too much current and does not need to be earthed.

This plug together with the wall socket is technically known as NEMA 1-15 (North American 15 A/125 V ungrounded). While the old one could be plugged either way, the modern ones have different sized pins and the neutral pin is wider and thus polarized equipment cannot be plugged either way but only in one position.

The new A plugs that are polarized cannot be plugged in the old wall sockets, while both the old and the new plugs can be plugged in both the new type A and B wall plugs.

Such plugs are also used in Japan JIS C 8303, Class II (Japanese 15 A /100 V ungrounded) but have stricter dimensional requirements, markings, mandatory testing and approval. While the Japanese plugs can be plugged in American wall sockets, the American polarized one requires adapters to be plugged in Japanese wall sockets.

This plug is used in the following countries.

American Samoa, Anguilla, Antigua, Aruba, Bahamas, Bangladesh, Barbados, Bermuda, Bolivia, Brazil, Cambodia, Canada, Cayman Islands, China (without holes in blades and slightly shorter blades), Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guam, Guatemala, Guyana, Haiti, Honduras, Jamaica, Japan, Laos, Lebanon, Liberia, Maldives, Mexico, Micronesia, Montserrat, Netherlands Antilles, Nicaragua, Niger, Okinawa, Panama, Peru, Philippines, Puerto Rico, St. Vincent, Saudi Arabia, Tahiti, Taiwan, Thailand, United States, Venezuela, Vietnam, Virgin Islands (U.S.& British), Yemen.

Type C



This plug and wall socket are used in the European continent, parts of the Middle East, many African countries, South America, Central Asia, and the previous Soviet Republics.

This is technically known as CEE 7/16 (Europlug 2.5 A/250 V unearthed). There are also other plugs with slightly bigger pins known as CEE 7/17. The pins are spaced 19 mm and 4 mm long and these plugs can be plugged in wall sockets type C, E, F, H and

in some of type L

CEE 7/16 is made for equipment that takes a current of 2.5 Amps or less. CEE 7/17 which is bigger has a round rubber or plastic base that prevents it from being plugged into small wall sockets. Its base has holes that accommodate side contacts of earth pins in the wall socket.

This plug is used in the following countries.

Albania, Algeria, Angola, Argentina, Austria, Azores, Balearic Islands, Bangladesh, Belgium, Bolivia, Bosnia, Brazil, Bulgaria, Burkina Faso, Burundi, Cameroon, Canary Islands, Cape Verde, Central African Republic, Channel Islands, Chile, Comoros, Congo, Croatia, Dem. Rep. of Congo (Zaire), Cote d'Ivoire (Ivory Coast), Cyprus, Denmark, Djibouti, Egypt, El Salvador, Equatorial Guinea, Eritrea, Faeroe Islands, Finland, French Guiana, Gabon, Germany, Gibraltar, Greece, Greenland, Guadeloupe, Guinea, Guinea-Bissau, Hungary, Iceland, India, Indonesia, Iran, Iraq, Isle of Man, Israel, Italy, Kazakhstan, Korea, Kuwait, Laos, Lebanon, Lithuania, Luxembourg, Macedonia, Madagascar, Madeira, Mali, Martinique, Mauritania, Mauritius, Monaco, Montenegro, Morocco, Mozambique, Myanmar, Nepal, Netherlands, Niger, Norway, Oman, Pakistan, Paraguay, Peru, Philippines, Poland, Portugal, Romania, Russia, Rwanda, St. Vincent, Senegal, Serbia, Slovenia, Somalia, Spain, Sudan, Suriname, Sweden, Switzerland, Syria, Thailand, Togo, Tunisia, Turkey, Uruguay, Vietnam, Zambia.

Type D



These are old British plugs that we had also used in Malta. The pins were round and the earth one was larger. Its technical name was BS 546 (5 A/250 V earthed). This was used up to the 40's. Previously it was used in South Africa but has now been changed to type M.

In the ex-British colonies it was later changed to type G. Nowadays type D 5A u 2A are sometimes used in the UK for switched

lighting to distinguish them from other power circuits.

This plug is used in the following countries.

Afghanistan, Bangladesh, Benin, Botswana, Cameroon, Chad, Dem. Rep. of Congo (Zaire), Dominica, Ecuador, El Salvador, Ethiopia, French Guiana, Ghana, Greece, Guadeloupe, Guyana, Hong Kong, India, Iraq, Jordan, Kenya, Lebanon, Libya, Macao, Madagascar, Maldives, Martinique, Monaco, Myanmar (Burma), Namibia, Nepal, Niger, Nigeria, Pakistan, Qatar, St. Kitts-Nevis, Senegal, Sierra Leone, Sri Lanka, Sudan, Tanzania, United Arab Emirates, Yemen, Zambia, Zimbabwe.

Type E



This type of plug and wall socket are French. Note that the earth pin is in the wall socket while the plug connected to the equipment has a hole where the earth pin makes contact. The pins are spaced 19 millimetres.

This type of wall plug also accepts plugs type C, E and F. This is used in France, Belgium, Denmark, Poland and other countries.

This does not fit with type F which is used in Germany, The Netherlands and other European continental countries because the earth pin is in the wall socket. The wall socket is fitted with the earth pin upwards **with the live wire connected to the LEFT and the neutral on the RIGHT.**

This plug is used in the following countries.

Belgium, Burkina Faso, Burundi, Cameroon, Canary Islands, Central African Republic, Chad, Comoros, Congo, Cote d'Ivoire (Ivory Coast), Czech Republic, Djibouti, El Salvador, Equatorial Guinea, France, French Guiana, Greece, Guadeloupe, Ireland, Indonesia, Italy, Laos, Latvia, Lithuania, Madagascar, Mali, Martinique, Monaco, Morocco, Niger, Poland, St. Vincent, Senegal, Slovakia, Syria, Tahiti, Tunisia.

Type F Schuko



This plug and wall socket are like type E except that the earth contact is made by side contacts instead of pins. This is known as Schuko from the invented German word "Schukostecker" that means "protective contact plug". This plug allows the possibility that the live and neutral wires be swapped and are therefore not polarized. This F wall socket also accepts plugs C u E.

This plug is used in the following countries.

Algeria, American Samoa, Aruba, Austria, Azores, Balearic Islands, Bosnia, Bulgaria, Cape Verde, Chad, Croatia, El Salvador, Finland, France, Germany, Greece, Guinea, Hungary, Iceland, Indonesia, Italy, Jordan, Korea, Laos, Luxembourg, Madeira, Monaco, Montenegro, Mozambique, Myanmar, Netherlands, Netherlands Antilles, Niger, Norway, Portugal, Romania, Serbia, Spain, Suriname, Sweden, Turkey, Uruguay.

Type G



These are the modern plugs that are also used in Malta and have a fuse in the plug connected to the equipment. The pins are rectangular and the earth one is bigger, longer and thicker and does not have insulation like the other pins. Normally wall sockets have switches. Wires are **LIVE RIGHT, NEUTRAL LEFT**.

They are rated at 13 Amps and are technically known as BS 1363 (British 13 A/230-240 V 50 Hz earthed and fused). For safety the regulations require that the wall socket holes be covered with shutters that open mechanically when the equipment plug is plugged in the wall socket. This does not allow other plugs to be plugged, although one can say that there is a practice that a screwdriver or other object is used to open the shutters to plug in other plugs, but one would be risking because they will not be fused

This plug is used in the following countries.

Bahrain, Bangladesh, Belize, Botswana, Brunei, Cameroon, Channel Islands, China, Cyprus, Dominica, El Salvador, Gambia, Ghana, Gibraltar, Grenada, Guatemala, Guyana, Hong Kong, Iraq, Ireland, Isle of Man, Jordan, Kenya, Kuwait, Lebanon, Macau, Malawi, Malaysia, Maldives, Malta, Mauritius, Myanmar, Nigeria, Oman, Qatar, St. Kitts-Nevis, St. Lucia, St. Vincent, Saudi Arabia, Seychelles, Sierra Leone, Singapore, Tanzania, Uganda, United Arab Emirates, United Kingdom, Vietnam, Yemen, Zambia, Zimbabwe.

Type H



These are Israeli plugs and are recognized from their pins that are in a triangular position. This is supposed to be rated at 16 Amps and 250 Volts.

As one can see, originally the pins were rectangular, but in 1989 they were changed for round ones because when they were used for heavy loads they became over-heated.

As from 1989, the wall sockets accept the new type of plugs as well as the old ones and type C. Nowadays the old wall sockets that only accept old H type plugs are very rare in Israel.

This plug is used in the following countries.

Gaza, Israel

Type I



These plugs are Australian and are mostly used in Australia and New Zealand. One can see that the pins are flat and in the form of a V while the earth pin is vertical. Normally they have a switch for added safety.

There is a plug version that is connected to equipment that has only two pins and is therefore without an earth pin, but wall sockets always have an earth connection. There are a number of Australian and New Zealand versions, including those with a capacity of 15 A, 20 A, 25 A u 32 A.

This plug is used in the following countries.

American Samoa, Argentina, Australia, China, El Salvador, Fiji, Guatemala, Kiribati, Nauru, New Zealand, Okinawa, Panama, Papua New Guinea, St. Vincent, Tajikistan, Tonga, Uruguay.

Next time I will give you further information on more plugs.

Lawrence

9H1AV/9H9MHR/9H79AV

MARL Activities

Membership Payment

Whoever has still not paid his membership should do so if he wants to remain a **MARL** member. The Financial Secretary is always ready to accept your membership fee whenever the **MARL** Centre is open or if you cannot come pay by cheque payable to **MARL**

We remind you that the **MARL** Centre is open every Tuesday and Thursday between 6.00 p.m. and 8.00 p.m. and Sunday between 10.00 a.m. and 12.00.

Yahoo Group

Be attentive and become members in the yahoo group to be fully informed with the latest activities that we intend to hold.

Do not forget that we may have activities which may not be able to appear on this magazine because it may have already been issued and therefore the notice will be sent on the yahoo group.

Send an e-mail to Ivan, **9H1PI** [ivan.privitera at gmail.com](mailto:ivan.privitera@gmail.com) to become members in the group.

We remind you that whoever wants to can download the Magazine from www.9h1mrl.org/newsletter.htm

Lawrence

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