MARL

MALTA

Magazine by MARL

For Maltese and Gozitan Radio Amateurs

Number 63

June 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 63 of this series.

From the last edition of the Magazine **MARL** has participated in the Spring Show at **San Anton Gardens** as well as the **Mtarfa Military Day**. While thanking all those who helped participated in these activities I encourage everyone who can to participate in every **MARL** activity or in which **MARL** will be participating. Further down you have some photos of these activities and thanks goes to all those who sent these photos.

We are still trying to be given an allocation on the frequency of **500 kHz** to be able to communicate with radio amateurs from a number of countries that have given an allocation on it to their radio amateurs.

I remind you that on this frequency there is a motion on the agenda of the International Telecommunications Union World Conference that is going to be held next year and probable as wished by radio amateurs there is going to be a world-wide allocation on this frequency or nearby frequencies.

Today you have information the voltage that one finds in the different countries as well as the frequency which nowadays is **50 Hz** or **60 Hz.** This is a continuation of the information I have given you earlier on different plugs used in differnet countries.

You also have a reminder of what I had written earlier on the use of our equipment from vehicles and wardens because it appears that there were some who either had not read or forgot what I had written. It is important to read it in your interest.

You also have other information on activities organized by foreign organizations such as the **ARRL VHF** contest, about the implimentation of **CEPT Recommendation TR61/01** by **Russia** and a list of ocuntries that have implimented this recommendation, as well as on the international museums weekend that are also held during June.

I remind you that my new e-mail is 9h1avLaw at gmail dot com where the letter L can be small and not capital.

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

Voltages and Frequencies

Today I am going to give you information on the voltages and frequencies that one finds in the countries around the world. In column 4 you have the types of plugs (sockets) that one finds used in the country. Where there is an asterix you have footnotes further down.

Country	Voltage	Frequency	Plug
Afghanistan	220 V	50 Hz	C, F*[1]
Albania	220V*[2]	50 Hz	C, F
Algeria	230V	50 Hz	C*[3], F
American Samoa	120V	60 Hz	A, B, F, I
Andorra	230V	50 Hz	C, F
Angola	220V	50 Hz	C
Anguilla	110V	60 Hz	A, (maybe B)
Antigua	230V*[4]	60 Hz	A, B
Argentina	220V	50 Hz	C, I*[5]
Armenia	220V	50 Hz	C, F
Aruba	127V*[6]	60 Hz	A, B, F
Australia[7]	240V	50 Hz	I
Austria[8]	230V	50 Hz	F
Azerbaijan	220V	50 Hz	C, F
Azores	220V*[9]	50 Hz	B, C, F
Bahamas	120V	60 Hz	A, B
Bahrain	230V*[10]	50 Hz*	G
Balearic Islands	220V	50 Hz	C, F
Bangladesh	220V	50 Hz	A, C, D, G, K
Barbados	115V	50 Hz	A, B
Belarus	220V	50 Hz	C, F
Belgium[11]	230V	50 Hz	E
Belize	110/220V	60 Hz	B, G
Benin	220V	50 Hz	E
Bermuda	120V	60 Hz	A, B
Bhutan[12]	230V	50 Hz	D, F, G
Bolivia	220/230V*[13]	50 Hz	A, C
Bosnia	220V	50 Hz	C, F
Botswana[14]	230V	50 Hz	M
Brazil	110/220V*[15]	60 Hz	A, B, C

[1] * A UN correspondent reports C and F common in Kabul, but it's likely a variety of plugs may be used around the country. Some sources report Type D also in use. Other reports indicate voltage variances from 160V to 280V.
[2] * Voltage variations common
[3] * A variation of Type C with a ground post offset about 1/2-inch from center may also be found.
[4] * Airport area is reportedly Antigua power is 110 V.
[5] * Neutral and line wires are reversed from that used in Australia and elsewhere.
[6] * Lago Colony 115V
[7] * Outlets typically controlled by adjacent switch.
[8] Type C may be found, but rare.
[9] * Ponta Delgada 110 V; to be converted to 220 V
[10] * Awali 110 V, 60 Hz
[11] Notes from correspondents: a C style plug can be used with E and F' receptacles. All double-insulated appliances are indeed fitted with a C plug, and can be used in any compatible receptacle (C E F and narrow L). Type C receptacles are prohibited in Belgium.
[12] Type M plugs also identified by some sources.
[13] * La Paz & Viacha 115V
[14] Type G may be found, but rare.
[15] * 127V are found in states of Bahia, Paraná including Curitiba, Rio de Janeiro, São Paulo and Minas Gerais, although 220V may be found in some hotels. Other areas are 220V only, with the exception of Fortaleza (240V). Outlets are often a combination of type A and C and can accept either type of plug.

Brunei	**240V**	**50 Hz**	**G**
Bulgaria	**230V**	**50 Hz**	**C*, F*[16]**
Burkina Faso	**220V**	**50 Hz**	**C, E**
Burundi	**220V**	**50 Hz**	**C, E**
Cambodia	**230V**	**50 Hz**	**A, C*[17]**
Cameroon	**220V**	**50 Hz**	**C, E**
Canada	**120V**	**60 Hz**	**A, B**
Canary Islands[18]	**220V**	**50 Hz**	**C, E, L**
Cape Verde	**220V**	**50 Hz**	**C, F**
Cayman Islands	**120V**	**60 Hz**	**A, B**
Central African Republic	**220V**	**50 Hz**	**C, E**
Chad	**220V**	**50 Hz**	**D, E, F**
Channel Islands	**230V**	**50 Hz**	**G**
Chile	**220V**	**50 Hz**	**C, L**
China, People's Republic of	**220V**	**50 Hz**	**A, I, G[19]**
Colombia	**110V**	**60 Hz**	**A, B**
Comoros	**220V**	**50 Hz**	**C, A**
Congo, People's Rep. of	**230V**	**50 Hz**	**C, E**
Congo, Dem. Rep. of (*former* Zaire)	**220V**	**50 Hz**	**C, D**
Cook Islands	**240V**	**50 Hz**	**I**
Costa Rica	**120V**	**60 Hz**	**A, B**
Côte d'Ivoire (Ivory Coast)	**220V**	**50 Hz**	**C, E**
Croatia	**230V**	**50 Hz**	**C, F**
Cuba[20]	**110/220V**	**60 Hz**	**A, B, C, F, L**
Cyprus	**240V**	**50 Hz**	**G**
Czech Republic	**230V**	**50 Hz**	**E**
Denmark[21]	**230V**	**50 Hz**	**C, K**
Djibouti	**220V**	**50 Hz**	**C, E**
Dominica	**230V**	**50 Hz**	**D, G**
Dominican Republic[22]	**110V**	**60 Hz**	**A**
East Timor[23]	**220V**	**50 Hz**	**C, E, F, I**
Ecuador	**120-127V**	**60 Hz**	**A, B**
Egypt	**220V**	**50 Hz**	**C**
El Salvador	**115V**	**60 Hz**	**A, B**
England (see UK)			
Equatorial Guinea[24]	**220V***	**50 Hz**	**C, E**
Eritrea	**230V**	**50 Hz**	**C**
Estonia[25]	**230V**	**50 Hz**	**F**
Ethiopia	**220V**	**50 Hz**	**D, J, L**

[16] * Outlets are reported as type F, although both type C and F plugs may be encountered.
[17] * Some of the outlets are a combination of type A and C and can accept either type plug. Plug G may also be found in some hotels.
[18] Type L plugs/outlets may have different pin spacing. The smaller and closer pins are for a rated current of 10A, the bigger and wider pins are for a rated current of 16A.
[19] The “official” plug type is like type A, but is slightly shorter and without holes in blades. Type A and I outlets are common, and Type G may also be found.
[20] Most of the older hotels are 110V. Some newer hotels are 220V. Some outlets are a combination of type A and C and can accept either type of plug.
[21] Denmark's connectors are slightly different from those used elsewhere. Pin diameter and spacing are standard, but outlets may have different housing depths which could interfere with standard adaptors due to “childproofing”. Also, Plug C fits into Type K outlets, but not vice versa.
[22] Type J may exist in some hotels.
[23] Power is poor in the country with frequent brownouts and blackouts, surges are frequent and a lot of surge-protecting power bars are used. Type I is common as much construction is done by Australians; type C is common in building built during Indonesian occupation; type E is less common; type F is common in offices but not in hotels.
[24] * Voltage varies between 150 & 175V with frequent outages
[25] Type C may still be found in old buildings. Type E plugs may work in either C or F type outlets.

Faeroe Islands	**220V**	**50 Hz**	**C, K**
Falkland Islands / Malvinas	**240V**	**50 Hz**	**G**
Fiji	**240V**	**50 Hz**	**I**
Finland	**230V**	**50 Hz**	**C, F**
France[26]	**230V**	**50 Hz**	**E**
French Guiana	**220V**	**50 Hz**	**C, E**
Gaza	**230V**	**50 Hz**	**H**
Gabon	**220V**	**50 Hz**	**C**
Gambia	**230V**	**50 Hz**	**G**
Georgia	**220V**	**50 Hz**	**C**
Germany	**230V**	**50 Hz**	**C, F**
Ghana	**230V**	**50 Hz**	**D, G**
Gibraltar	**240V**	**50 Hz**	**C, G**
Greece	**220V**	**50 Hz**	**C, D, E, F**
Greenland	**220V**	**50 Hz**	**C, K**
Grenada (Windward Is.)	**230V**	**50 Hz**	**G**
Guadeloupe	**230V**	**50 Hz**	**C, D, E**
Guam	**110V**	**60 Hz**	**A, B**
Guatemala	**120V**	**60 Hz**	**A, B, G, I**
Guinea	**220V**	**50 Hz**	**C, F, K**
Guinea-Bissau	**220V**	**50 Hz**	**C**
Guyana[27]	**240V***	**60 Hz***	**A, B, D, G**
Haiti	**110V**	**60 Hz**	**A, B**
Honduras	**110V**	**60 Hz**	**A, B**
Hong Kong[28]	**220V***	**50 Hz**	**G, M**
Hungary	**230V**	**50 Hz**	**C, F**
Iceland	**220V**	**50 Hz**	**C, F**
India	**230V**	**50 Hz**	**C, D**
Indonesia	**127/230V***[29]	**50 Hz**	**C, F, G**
Iran	**230V**	**50 Hz**	**C**
Iraq	**230V**	**50 Hz**	**C, D, G**
Ireland (Eire) [30]	**230V**	**50 Hz**	**G**
Isle of Man	**240V**	**50 Hz**	**C, G**
Israel	**220V**	**50 Hz**	**C**
Italy[31]	**230V**	**50 Hz**	**C, F, L**
Jamaica	**110V**	**50 Hz**	**A, B**
Japan	**100V**	**50/60 Hz***[32]	**A, B**
Jordan	**230V**	**50 Hz**	**D, F, G, J***[33]
Kenya	**240V**	**50 Hz**	**G**
Kazakhstan	**220V**	**50 Hz**	**C**
Kiribati	**240V**	**50 Hz**	**I**
Korea, South	**220V**	**60 Hz**	**C, F***[34]

[26] Type C plugs may be found on some appliances and will fit the Type E outlet. Type C outlets may be found in old buildings. Type A may also be found in old buildings but is illegal.
[27] * Inside the capital city of Georgetown, both 120V and 240V at either 50Hz or 60Hz are found, depending on the part of the city (50Hz being the most common). Actual voltage may vary from area to area.
[28] Type M were replaced by Type G but can still be found.
[29] * Conversion to 230V is in progress and completed in principal cities
[30] Type D were once common and may still be occasionally found
[31] Type L plugs/outlets may have different pin spacing. The smaller and closer pins are for a rated current of 10A while the bigger and wider pins are for a rated current of 16A. Both types are currently used and comply with the relevant Italian (CEI) regulations. Some outlets have overlapping holes to accept either older or newer types.
[32] * Eastern Japan 50Hz (Tokyo, Kawasaki, Sapporo, Yokohoma, and Sendai); Western Japan 60Hz (Osaka, Kyoto, Nagoya, Hiroshima)
[33] * Type C may be found in some hotels.
[34] * Type F are likely to be found in offices and hotels. 110V power with plugs A and B were previously used but are being phased out. Older buildings may still have them and some hotels offer both 110V and 220V service.

Kuwait	**240V**	**50 Hz**	**D*[35], G**
Laos	**230V**	**50 Hz**	**A, B, C, E, F**
Latvia	**220V**	**50 Hz**	**C, F**
Lebanon	**110/220V**	**50 Hz**	**A, B, C, D G**
Lesotho	**220V**	**50 Hz**	**M**
Liberia	**120V**	**60 Hz**	**A, B**
Libya	**127V*[36]**	**50 Hz**	**D, L**
Lithuania	**220V**	**50 Hz**	**C, F**
Liechtenstein	**230V**	**50 Hz**	**J**
Luxembourg	**220V**	**50 Hz**	**C, F**
Macau	**220V**	**50 Hz**	**D, G**
Macedonia	**220V**	**50 Hz**	**C, F**
Madagascar	**220V**	**50 Hz**	**C, E**
Madeira	**220V**	**50 Hz**	**C, F**
Malawi	**230V**	**50 Hz**	**G**
Malaysia	**240V**	**50 Hz**	**G**
Maldives	**230V**	**50 Hz**	**A, D, G, J. K, L**
Mali	**220V**	**50 Hz**	**C, E**
Malta	**230V**	**50 Hz**	**G**
Martinique	**220V**	**50 Hz**	**C, D, E**
Mauritania	**220V**	**50 Hz**	**C**
Mauritius	**230V**	**50 Hz**	**C, G**
Mexico	**127V**	**60 Hz**	**A, B**
Micronesia (Federal States of)	**120V**	**60 Hz**	**A, B**
Monaco	**127/220V**	**50 Hz**	**C, D, E, F**
Mongolia	**220V**	**50 Hz**	**C, E**
Montenegro	**220V**	**50 Hz**	**C, F**
Montserrat (Leeward Is.)	**230V**	**60 Hz**	**A, B**
Morocco	**127/220V*[37]**	**50 Hz**	**C, E**
Mozambique	**220V**	**50 Hz**	**C, F, M*[38]**
Myanmar (formerly Burma)	**230V**	**50 Hz**	**C, D, F, G*[39]**
Namibia	**220V**	**50 Hz**	**M**
Nauru	**240V**	**50 Hz**	**I**
Nepal	**230V**	**50 Hz**	**C, D**
Netherlands	**230V**	**50 Hz**	**C, F**
Netherlands Antilles	**127/220V*[40]**	**50 Hz**	**A, B, F**
New Caledonia	**220V**	**50 Hz**	**F**
New Zealand	**230V**	**50 Hz**	**I**
Nicaragua	**120V**	**60 Hz**	**A**
Niger	**220V**	**50 Hz**	**A, B, C, D, E, F**
Nigeria	**240V**	**50 Hz**	**D, G**
Northern Ireland (see UK)			
Norway	**230V**	**50 Hz**	**C, F**
Okinawa	**100V*[41]**	**60 Hz**	**A, B, I**
Oman	**240V*[42]**	**50 Hz**	**G**
Pakistan	**220V**	**50 Hz**	**C, D**
Palmyra Atoll	**120V**	**60 Hz**	**A, B**
Panama	**110V*[43]**	**60 Hz**	**A, B**

[35] * Type D are primarily used for 15A service, Type G are primarily for 13A service.
[36] * Barce, Benghazi, Derna, Sebha & Tobruk 230V
[37] * Conversion to 220 V only underway
[38] * Type M found especially near the border with South Africa, including the capitol, Maputo.
[39] Type G* found primarily in better hotels. Also, many of the major hotels chains are said to have multipurpose outlets, which will take Australian 3-pin plugs and perhaps other types.
[40] * St. Martin 120V 60Hz; Saba & St. Eustatius 110V 60Hz A, maybe B
[41] * Military facilities 120V
[42] * Voltage variations common

Papua New Guinea	**240V**	**50 Hz**	**I**
Paraguay	**220V**	**50 Hz**	**C**
Peru	**220V*[44]**	**60 Hz***	**A, B, C**
Philippines[45]	**220V**	**60 Hz**	**A, B, C**
Poland	**230V**	**50 Hz**	**C, E**
Portugal	**230V**	**50 Hz**	**C, F**
Puerto Rico	**120V**	**60 Hz**	**A, B**
Qatar	**240V**	**50 Hz**	**D, G**
Réunion Island	**220V**	**50 Hz**	**E**
Romania	**230V**	**50 Hz**	**C, F**
Russia[46]	**220V**	**50 Hz**	**F, C**
Rwanda	**230V**	**50 Hz**	**C, J**
St. Kitts & Nevis (Leeward Is.)	**230V**	**60 Hz**	**D, G**
St. Lucia (Windward Is.)	**240V**	**50 Hz**	**G**
St. Vincent (Windward Is.)	**230V**	**50 Hz**	**A, C, E, G, I, K**
Samoa	**230V**	**50 Hz**	**I**
Saudi Arabia	**127/220V**	**60 Hz**	**A, B, F, G**
Scotland (*See* UK)			
Senegal	**230V**	**50 Hz**	**C, D, E, K**
Serbia	**220V**	**50 Hz**	**C, F**
Seychelles	**240V**	**50 Hz**	**G**
Sierra Leone	**230V**	**50 Hz**	**D, G**
Singapore[47]	**230V**	**50 Hz**	**G**
Slovak Republic	**230V**	**50 Hz**	**E**
Slovenia	**220V**	**50 Hz**	**C, F**
Somalia	**220V*[48]**	**50 Hz**	**C**
South Africa	**220/230V*[49]**	**50 Hz**	**M**[50]**
Spain[51]	**230V**	**50 Hz**	**C, F**
Sri Lanka	**230V**	**50 Hz**	**D**
Sudan	**230V**	**50 Hz**	**C, D**
Suriname	**127V**	**60 Hz**	**C, F**
Swaziland	**230V**	**50 Hz**	**M**
Sweden	**230V**	**50 Hz**	**C, F**
Switzerland[52]	**230V**	**50 Hz**	**J**
Syria	**220V**	**50 Hz**	**C, E, L**
Tahiti[53]	**220V**	**60 Hz**	**A, B, E**
Tajikistan	**220V**	**50 Hz**	**C, I**
Taiwan	**110V**	**60 Hz**	**A, B**
Tanzania	**230V**	**50 Hz**	**D, G**
Thailand	**220V**	**50 Hz**	**A, C*[54]**
Togo	**220V*[55]**	**50 Hz**	**C**
Tonga	**240V**	**50 Hz**	**I**

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[43] * Panama City 120V
[44] * Talara 110/220V; Arequipa 50Hz
[45] Type A most commonly found.
[46] Type F used in new construction. Type C are common in older structures
[47] Type A adaptors are widely available from shops as an extension set of 2 to 5 sets of sockets and are most commonly used for audio and video equipment.
[48] * Berbera 230V; Merca 110/220V
[49] * Grahamstad & Port Elizabeth 250V; also found in King Williams
[50] ** Types C and G can also be found in some areas.
[51] It is reported that in Barcelona's Barrio Gothic, voltage is 120V 60Hz using Types C and F plugs. Step up transformers are required to use typical European devices.
[52] Type C plugs are common on appliances, and will fit the Type J outlet.
[53] All electrical outlets are protected by ground fault circuit interruptors (GFCI).
[54] * Some outlets are a combination of type A and C and can accept either type plug.
[55] * Lome 127V

Trinidad & Tobago	**115V**	**60 Hz**	**A, B**
Tunisia	**230V**	**50 Hz**	**C, E**
Turkey	**230V**	**50 Hz**	**C, F**
Turkmenistan	**220V**	**50 Hz**	**B, F**
Uganda	**240V**	**50 Hz**	**G**
Ukraine	**220V**	**50 Hz**	**C**
United Arab Emirates	**220V***	**50 Hz**	**G**
United Kingdom	**230V*[56]**	**50 Hz**	**G**
United States of America	**120V**	**60 Hz**	**A, B**
Uruguay	**220V**	**50 Hz**	**C, F, I*[57], L**
Uzbekistan	**220V**	**50 Hz**	**C, I**
Vanuatu[58]	**230V**	**50 Hz**	**I**
Venezuela	**120V**	**60 Hz**	**A, B**
Vietnam	**127/220V*[59]**	**50 Hz**	**A, C, G**
Virgin Islands (British and U.S.)	**115V**	**60 Hz**	**A, B**
Wales *(See* UK)			
Yemen, Rep. of	**220/230V**	**50 Hz**	**A, D, G**
Zambia	**230V**	**50 Hz**	**C, D, G**
Zimbabwe	**220V**	**50 Hz**	**D, G**

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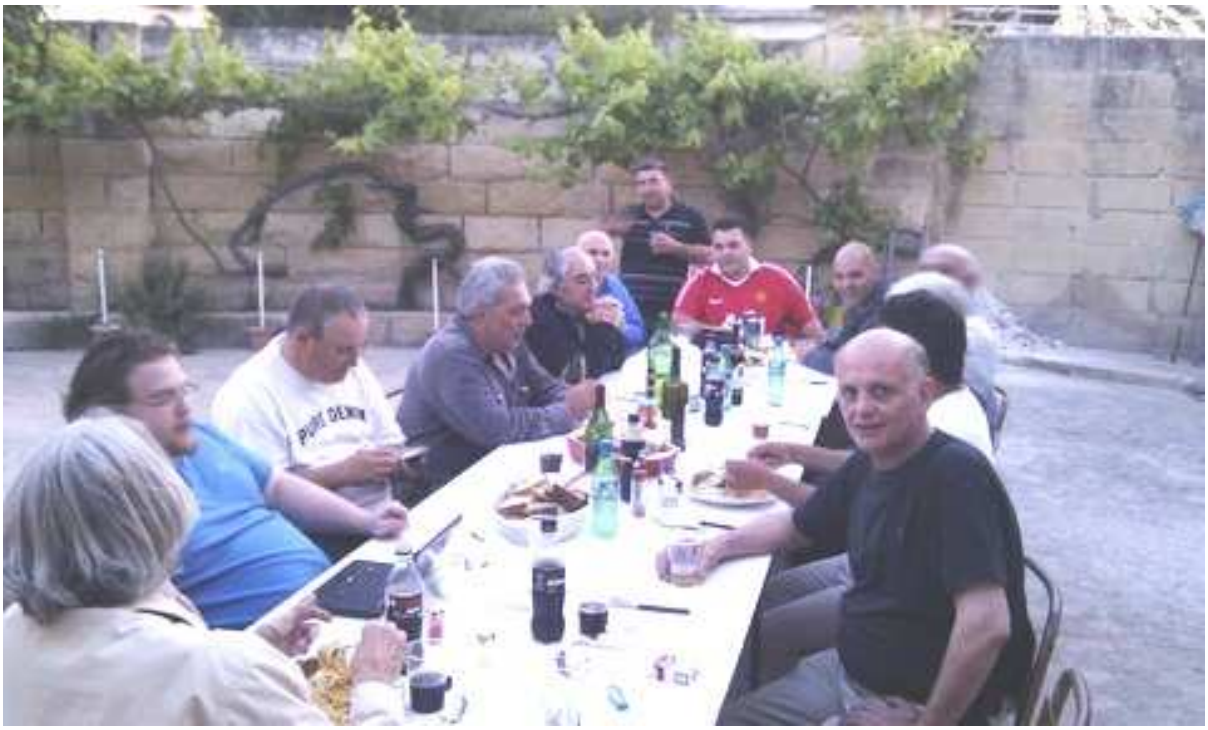
Get together



[56] * Outlets typically controlled by an adjacent switch. Though *nominal* voltage has been officially changed to 230V, 240V is within tolerances and commonly found.
[57] Type F becoming more common. Neutral and line wires are reversed from that used in Australia and elsewhere.
[58] Type G may linger from the British Colonial period, but are now a rarity.
[59] * To be standardized at 220V. Type G found in newer hotels, primarily those built by Singaporean and Hong Kong developers.

As you know get together between friends are being organized at the **MARL** Centre. These get together are advertised to the members by means of e-mails on the Yahoo group. Here you have a photo taken during one of the get together sent by **Mario Buttigieg**, **9H1TM**.

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The use of equipment in the car

Lately it appears that there were some radio amateurs who either had not read what I had written or forgot because while talking to each other, one of them said that he was going to stop talking because there were wardens. Some time ago I had written in the Magazine that as radio amateurs we can use our equipment in the car because there is a specific exemption in the law.

Therefore go to magazine Number 40 of July 2009 where you will find all the information tat I had previously written. This information is about 3 pages long and in it I explained how a two-way radio can be operated as well as writing about the Legal Notices that grant this exemption.

Therefore, all you have to do is to keep a copy of these legal Notices in your car so that if someone stops you show them to him because they can tell you nothing because you will be acting according to what the law states. Just be careful where you are driving.

Don't forget that if you have any problems with the wardens send me an e-mail to my account at **9h1avlaw @ gmail.com**

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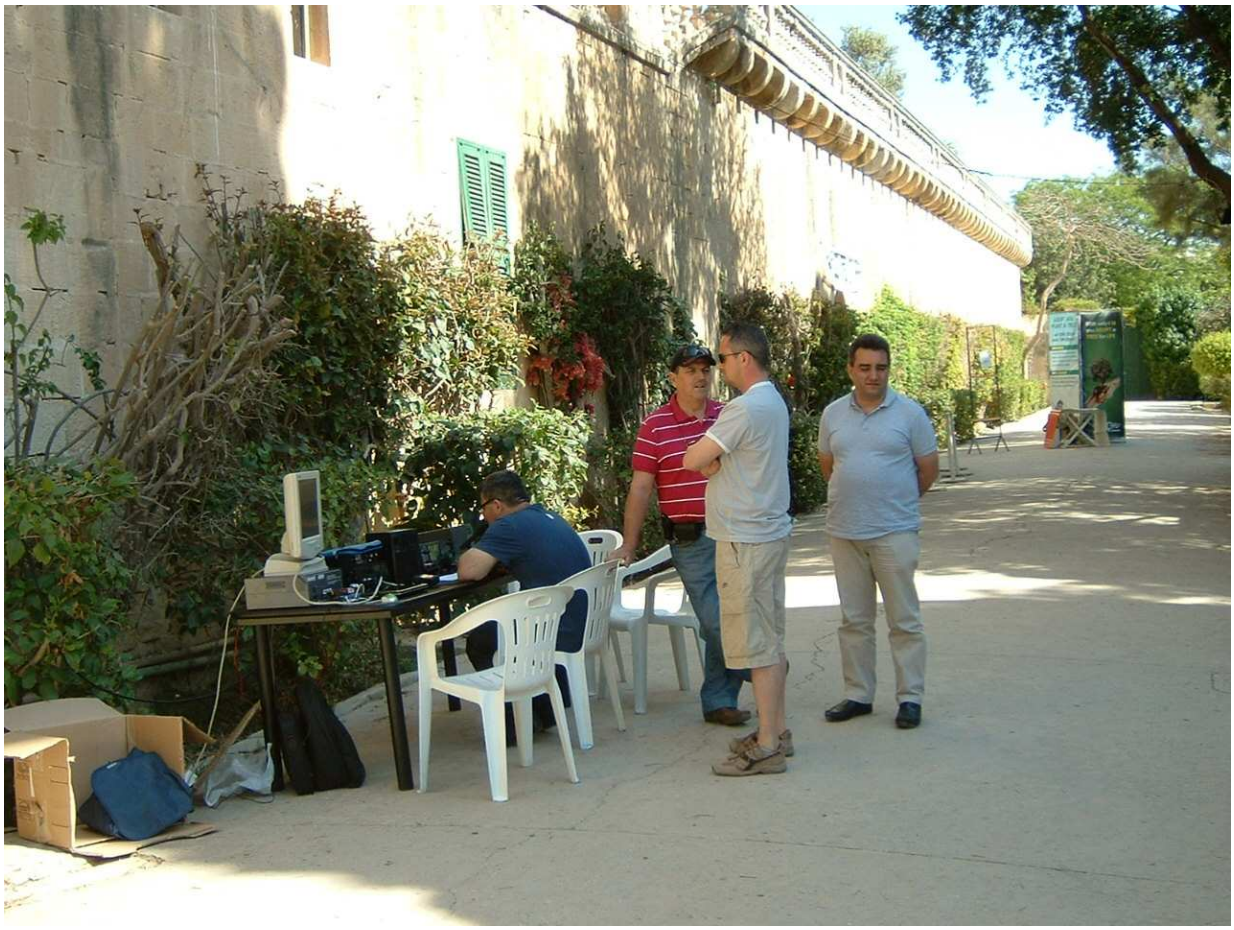
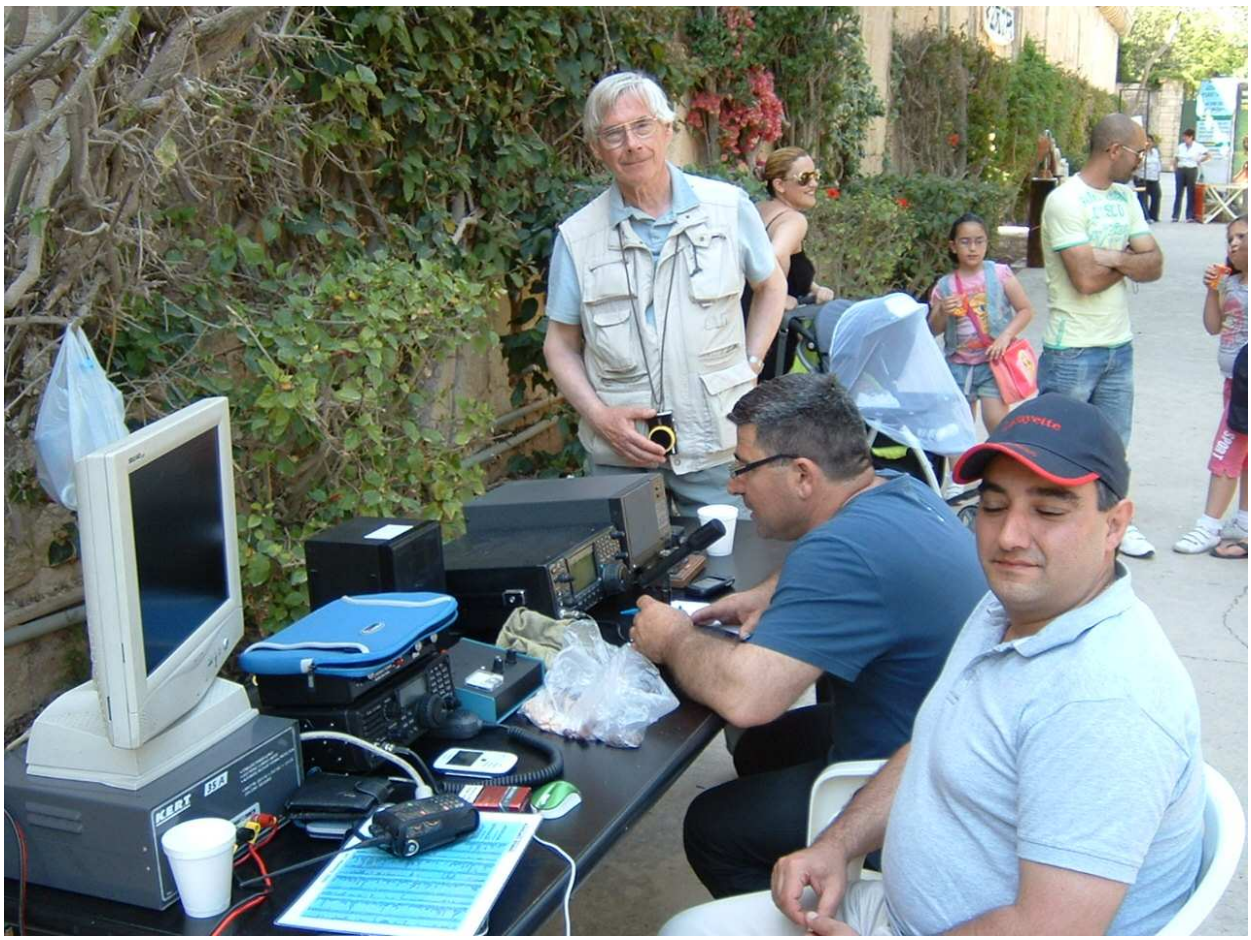
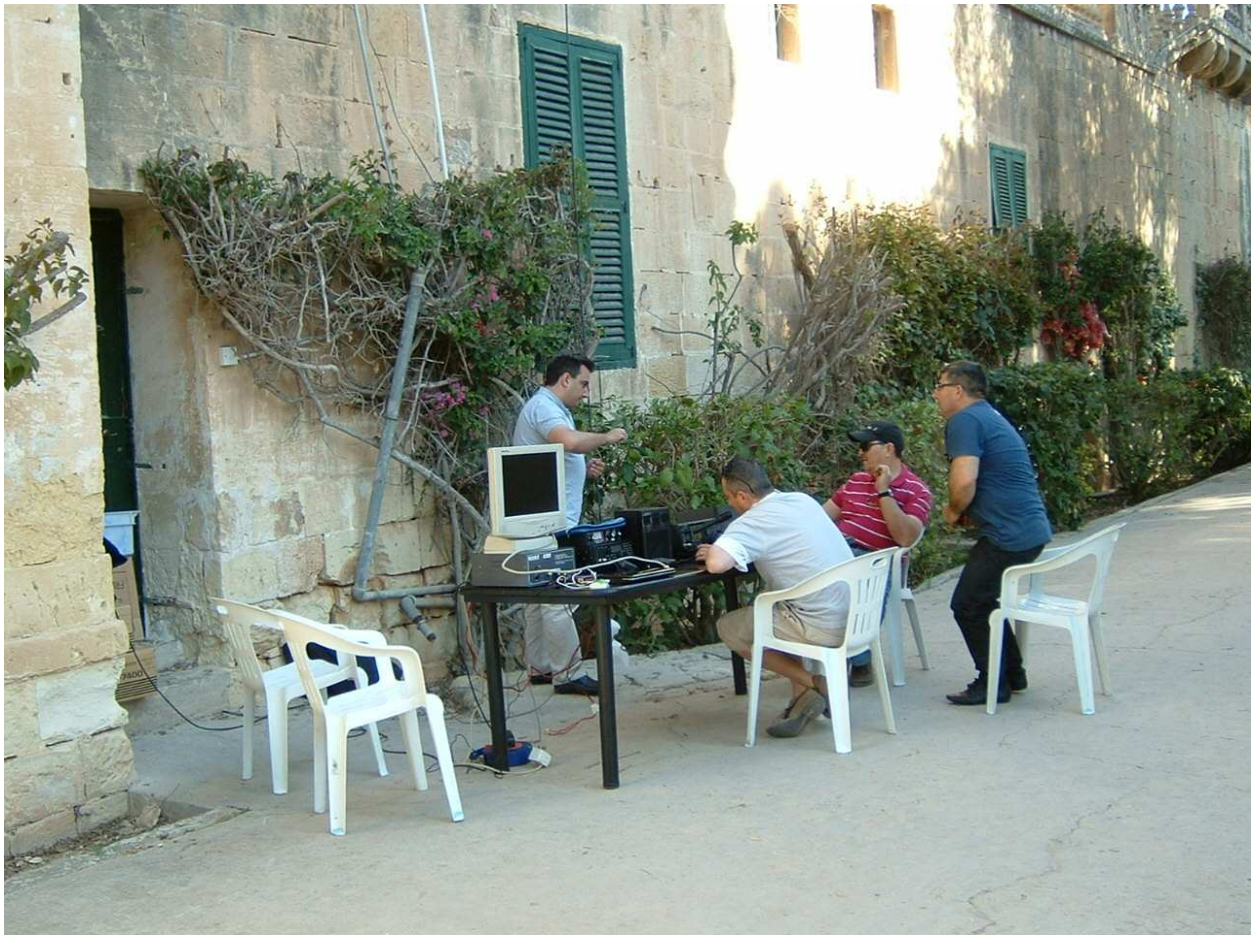
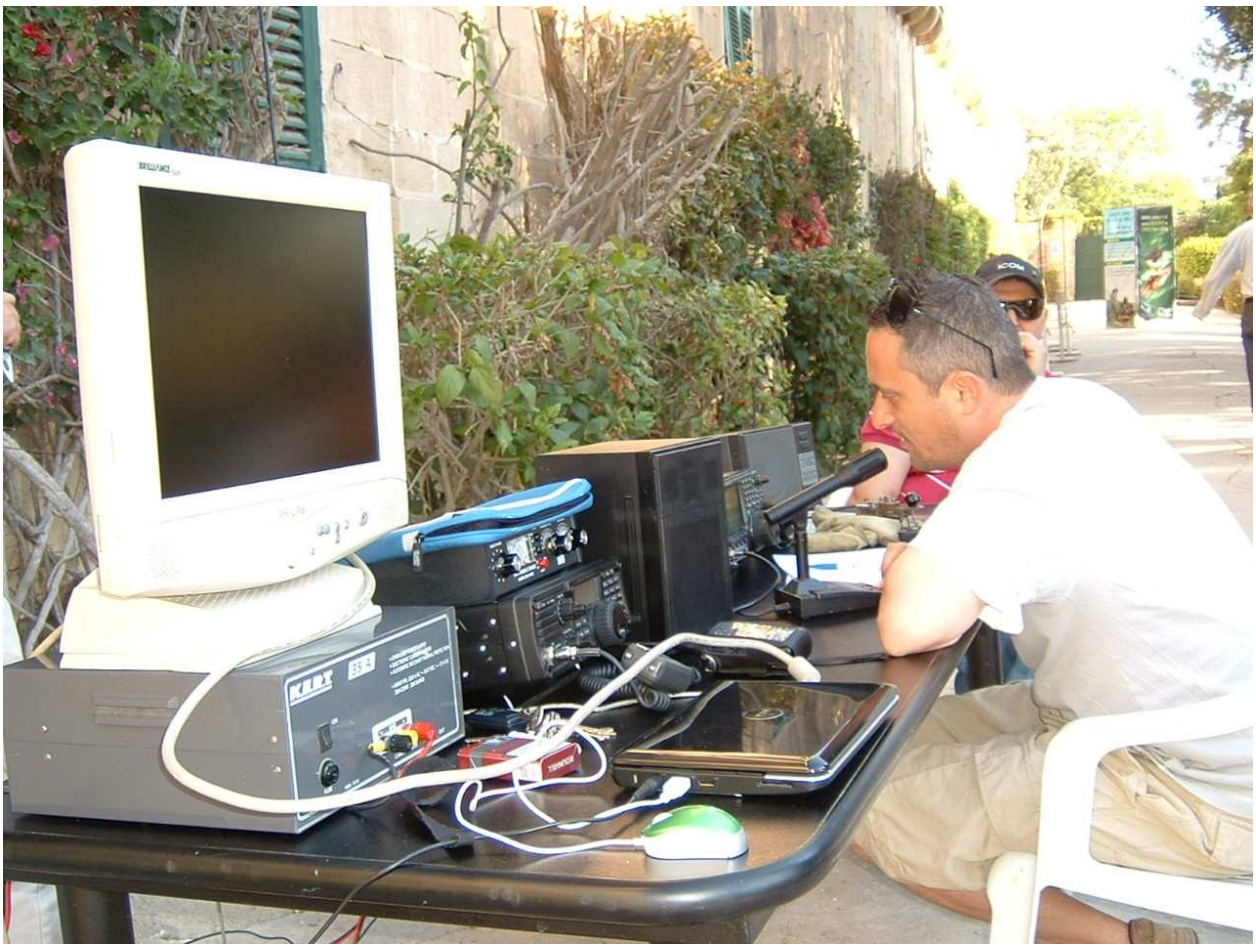
Spring Fair at San Anton









These were a few photos of **MARL's** participation at the Spring Fair in **San Anton Gardens** that was held in May sent by Publius to the Yahoo group. Due to a number of other photos sent by other radio amateurs, I am going to put them together in a specific edition of the Magazine.

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Other information

I remind you that between the 11 and 12 June there is the **ARRL VHF Contest** and since propagation is opening up also on **50 MHz** it will be useful for those who like contests to listen because they will have a good opportunity to perhaps talk to some new country on this frequency.

Russia has now introduced the **CEPT Recommendation TR61/01** and therefore Maltese radio amateurs who may be in Russia for a period not exceeding three months can talk from there. As of 18 May the following countries had introduced this Recommendation.

Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark (including Greenland and the Faroe Islands), Estonia, Finland, France (including Corsica, Guadeloupe, French Guyana, Martinique, St Bartholomew, St Pierre and Miquelon, St Martin, Reunion and its Dependencies, Mayotte, French Antarctica, French Polynesia and Clipperton, New Caledonia, and Wallis and Futuna), Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and the United Kingdom (including Northern Ireland, the Channel Islands and the Isle of Man).

During the weekend on 19 to 19 June as well as during the weekend on 25 and 26 June there is the International Museums weekend.

One can go to this activity internet webpage **http://www.ukradioamateur.co.uk/imw/** where s/he can download all the information as well as a list of museums that had participated in previous years as well as those who have registered to participate this year.

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MARL Activities

Activities being held at the MARL Centre are discussions by Fortunato, 9H1ES on safety due to antenna radiation as well as practical lessons on using other equipment by radio amateurs. Thanks to Fortunato and to all those who are helping as well as all those who are participating in every activity organized by MARL.

On Tuesday 7 June the lectures are going to be held at Wied Rini near the ex-services towers. At 8 in the morning everyone meet at the MARL Centre where the necessary equipment as well as the 3 element Yagi will be picked up.

There is going to be practical information on how to make antennas, trapped dipole, how to build and set traps with a GDO and other interesting information. Frequencies will be chosen at the time. Fortunato is going to bring traps, wires, capacitors, isolators etc. Food, drinks, to shade from the sun and the rest you will have to bring with you.

Radio amateurs as well as radio listeners should participate in these activities because they are very useful for everyone.

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 to become members in the group.

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

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