# W5YI

**America's Oldest Ham Radio Newsletter**

# REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

**May be republished providing credit is given to *The W5YI Report.***



Fred Maia, W5YI, Editor, P. O. Box 565101, Dallas TX 75356
Electronic mail: fmaia@prodigy.net Website: http://www.w5yi.org
**Tel. 817-461-6443 FAX: 817-548-9594**


*In This Issue...*

**Ham Radio Around the World!**

**For the most part, ham radio growth has stalled and most countries are reporting that their ham operator population is shrinking. Primary cause seems to be the popularity of the Internet and the availability of inexpensive cellular telephones. This issue looks into Amateur Radio license examination requirements, global opinions on the need for manual CW exams ...and what is being done to revitalize the hobby.**


**Vol. 21, Issue #18** **$1.50** PUBLISHED TWICE A MONTH **September 15, 1999**


## Special Report: The State of Amateur Radio Around the World!

Ham radio is a global hobby and exists in nearly every country. Have you ever wondered how our Amateur Service compares with others? In order to find out, we wrote the national societies of more than 100 different countries.

We asked each to tell us how many licensed amateurs they had and what the examination requirements were to obtain their various licenses. We also wanted to know if their Amateur Service was growing and how they felt about the international Morse code requirement.

The responses are still coming in, but here is what we have found out so far. Keep in mind that our inquiry was directed to national ham radio organizations whose membership historically consists of long term, Morse-proficient radioamateurs. (In alphabetical order:)

---

**ARUBA – Morse should not be an exam requirement.** Anthony Thiel, P43T says there are 80 licensed radioamateurs in Aruba but only about 40 own ham equipment. "It is estimated that about 35 go on the air."

There are three license classes in Aruba. Class A permits all privileges on all ham bands. "Class B is CW only on portions of certain HF bands. The Class A license requires Morse proficiency at 13 words-per-minute and 8 wpm for the "B" license. The national society, the Aruba Amateur Radio Club has proposed to eliminate the 8 wpm class and reduce the 13 wpm to 12 wpm. In Aruba, the amateur examinations are administered verbally twice a year in April and in November.

"The AARC and its members feel that Morse code should be eliminated as a requirement for HF privilege, but kept as an optional mode," Thiel said. Amateur radio is expanding in Aruba and the club is "...marketing towards the people on 11 meters ...the biggest class ever of highly motivated students. About 20."

"We feel that core issues such as CW should be surveyed by IARU. It is like this subject is kept under a tight lid by IARU and away from discussion. It is like IARU does not have a vision/mission to lead the future of Amateur Radio Service. It is about time that all member societies are surveyed in an unbiased manner in order to determine what really lives under all international societies. This way all societies (1 per country) can all walk in the same direction." ***[Submitted by Anthony Thiel, P43T, IARU Liaison for AARC.]***

---

**BANGLADESH – Nizam, S21B writes that there are 30 licensed Amateur Radio Operators** in Bangladesh at present. There is only one license class conferred by passing an examination on electronics, operating procedures and regulations. The required code speed is 20 words-per-minute but the examinations are "...a bit liberal in practice."

He believes that the future need for Morse should be at the option of the local (country) administration. "Amateur Radio is growing very slowly in Bangladesh. Youngsters [are] more interested in Internet/ Computers, [and the] cost of rigs is another hindrance. Bangladesh plans to set more club stations in remote areas in hopes of increasing the Amateur population." ***[Submitted by Nizam Chowdhury, S21B, Vice President, Bangladesh Amateur Radio League.]***

---

**BARBADOS with a population of 260,000 has approximately 300 licensed ham operators** of which about 75 are members of the ARSB. "We have two license classes. One is CW only (not very popular) and an all mode one. The only difference is between the two is the mode. The local is exam is based on the English City & Guilds Radio Amateurs Exam (RAE). Candidates may opt to do the RAE instead of the local exam. The Morse exam is 12 wpm plain text and 5 figure number groups. There are no plans to change it."

"I personally do not use CW on the ham bands but I feel that some knowledge of the code is important. I also do not feel that CW is dying, just look at the CQWW CW contest


**THE W5YI REPORT [Pub. No. 009-311]** is published twice monthly by The W5YI Group, Inc., 2000 E. Randol Mill Road # 608-A, Arlington, TX 76011
**SUBSCRIPTION RATE:** (U.S., Canada and Mexico) One Year (24 issues) $24.50 • Two Years: $45.00 • Three Years: $64.00. • Tel. 817/461-6443
Foreign Subscriptions via Air Mail: $39.50 per year. (Payment may be made by Check, Money Order, VISA or MasterCard payable in U.S. funds.)
Periodicals Postage paid at Arlington, TX. **POSTMASTER:** Send address changes to THE W5YI REPORT, P.O. Box 565101, Dallas, TX 75356

scores."

"The exams are held in December and June but most people prefer to do it in December. There are usually about 10 candidates, with a pass rate varying between 50% and 90%. Last year, however. only 1 in about 8 passed (Morse failure). I suppose you could say that the hobby is growing but very slowly."

"Most hams in Barbados are not very interested or know about developments in the international scene. I have been active in contests for a few years now and have also brought back 6m to Barbados. There are also a few hams on the digital modes." ***[Submitted by: Stephen Thompson, 8P6CV.]***

---

**BELGIUM – has less stringent examinations.** There are about 5600 Amateur radio operators in Belgium. Their Novice class (ON2) may use (AM, SSB, NBFM) phone modes on 2 meters with a max. power of 15 Watts. ON1's may use all modes (except CW) on all amateur bands above 30 MHz. The ON4 class has access to all modes on all amateur bands.. The maximum power level for the ON1 and ON4 class is 150.

The ON1 and ON4 examination meets the HAREC (Harmonized Amateur Radio Certificate) standards. "The ON2 examination is similar to the ON1 but easier . The examination consists of 12 questions on regulations and 30 questions about electricity, electronics and radiotechnique." All examinations are multiple choice. "ON1 questions have 4 possible answers, and for ON2 (novice) there are only 3 possibilities. To pass the examinee must have two-thirds of the points.." The CW exam consists of passing 10 wpm during a 5 minute exam with a maximum of 10 errors allowed .

The number of radioamateurs in Belgium is decreasing. "Most of hams wish to keep a certain level of [CW] knowledge to have access to the HF (0-30 MHz) bands. Nevertheless the European countries must follow the CEPT recommendation. And CEPT looks to the IARU Region One for advice." ***[Submitted by Pierre Cornelis, ON7PC, Board member of the UBA [Royal Union of Belgian Amateurs ] and IARU Liaison Officer. Pierre also holds a U.S. Advanced class FCC license with the call KN4MW.]***

---

**CANADA - has about 48,000 Amateur station licenses.** That includes multiple call signs, club stations, repeaters and so forth. The best guess of RAC [Radioamateurs of Canada, their national society] is that the number of individual amateurs is around 42,000. "An unknown percentage of these is inactive."

Since 1990, there are four certificate "Qualifications" available. Passing the "basic" written examination allows a maximum of 200 watts PEP above 30 MHz. It is necessary to pass the "Advanced" theory examination to homebrew transmitters and amplifiers or to sponsor a voice repeater or club station.

The current CW exam requirements in Canada are 5 wpm. This permits all mode operation on 160m and 80m but "Industry Canada is expected to add 10 meter privileges late in 1999. Passing 12 wpm yields all band, all mode privileges.

"Radio Amateurs of Canada took the position that we would not oppose the removal of Morse code proficiency as a treaty requirement by ITU. We have not considered the advisability of retention or removal of Morse code as a technical proficiency requirement by the national regulator - Industry Canada."

"The total number of licenses has been fairly constant over the last two or three years. Industry Canada is in the process of streamlining the administration and now has a single centralized office issuing certificates and call signs."

"Several weeks ago I sent you a copy of a file containing a paper RAC had written for IARU on the future." *Editor's Note: We show a summary of that report at the end of this issue.* ***[Submitted by Doug Leach, VE3XK – 1st VP, RAC]***

---

**CHINA – "At present CRSA has about 900 amateur radio operators.** In China, we have 4 classes for Amateur Radio license. Class 1 is the highest, class 4 is the beginning class. The content of the class 4 written examination is different from Class 1 to 3. It consists mainly of two parts; Amateur Radio regulation in China and world wide and amateur radio theory and practice."

"Morse code is required for Class 3 to 1. The requirement is Class 3: 40 cpm (characters per minute - 8 wpm), Class 2: 50 cpm (10 wpm), and Class 1: 70 cpm/receive (14 wpm) and 60 cpm/transmit (12 wpm). So far, CRSA has not reduced the code speed for the exams and we have no plan to do so in the near future. As a traditional radio contact method, especially in China, manual Morse code will be needed for a long time, therefore we still encourage our members to improve their skill. But we are considering not asking the young student to take the Morse code exams, but give them chance to practice and to let them become interested in it."

"The amateur service in China is growing. As private computer growing faster in China, we are now combining SSTV in amateur radio, especially among our club stations." *{Submitted by Han Zhaofang BG1HZF, CRSA)*

---

**COSTA RICA - has no Morse exam requirement at present!** Mario Melendez- TI2DLL writes that "There are currently 2416 registered stations in the National Radio Control database. The database is slightly out of date, so we could estimate 2500 stations, covering all modes from HF to SHF."

There are three license classes in Costa Rica: A, B and C. A standard written examination covering electronics, procedures and regulations is administered but "Currently there are no Morse requirements. The next law regarding amateur radio stations will include Morse requirements for Superior (A) and Intermediate (B) classes, as well as basic receive capability for Beginner class (C).

"Personally, I do not consider it a bare necessity for radio amateurs to be Morse proficient. I consider Morse to be an obsolete technology, dating back to the birth of the telecommunications era. Currently developments in repeating technologies and radio equipment in general make it very difficult to have a situation where voice or data communication cannot be readily established and where the only viable alternative is Morse code."

"This does not discredit Morse code as a very interesting field in amateur communications. Morse code is entertaining and helps develop memory and coordination skills. It is a mode worth experimenting with and experiencing, but should not be forced on any radio amateur who does not wish to be involved with it."

"The above is my personal opinion and should not be extrapolated to TIØRC. The Radio Club of Costa Rica will continue to support those who wish to learn Morse code, as it always has, with Morse training sessions and courses whenever necessary. We consider it important that future generations of amateurs have the opportunity to experiment, not only with current modes of operation, but with modes which may have existed and which gave birth to amateur radio as we know it."

It is hard to say if Amateur Radio is growing in Costa Rica. "Exact statistics on this are not readily available at the

time, since National Radio Control has not finished updating its computer databases. There are 3 dates on which exams are given for amateur radio licenses. The number of amateurs who obtain their license ranges from 10 to 15 each test. We could speculate at the present that yes, amateur service is growing in Costa Rica at a moderate rate.'

"For each test date Radio Club of Costa Rica holds a course covering all exam topics and several practice sessions, beginning several months in advance. We are proud to say that a large percentage of new amateurs are due to TI0RC's courses."

"This year FRACAP's *(Amateur Radio Federation of Central America)* annual convention will be held in San Jose [Costa Rica]. The dates are November 12,13 and 14. The Radio Club of Costa Rica, along with several other national and international radio clubs are actively working towards the organization of this important event. All amateurs worldwide wishing to participate are welcome. More information may be found on <http://fracap99.cjb.net> or at Radio Club's home page, <http://-www.qsl.net/ti0rc>, or by writing to fracap1999@usa.net. ***[Submitted by Mario Melendez- TI2DLL, Secretary, Radio Club of Costa Rica, the national society to the IARU.]***

---

**CUBA – "According June 1999 numbers we had in that moment 2,188 hams all over the country.** We have three classes. Third Class = CL, Second Class = CM and First Class = CO"

"Four basic subjects are examinated: CW. ( words per minutes rate change in each category. For CL Class 5 wpm, For CM Class 10 wpm, For CO Class 15 wpm ), Rules and Regulations, Electronic and Communication Theory and Operating practices. The exams are organized by the Radio Administration and the FRC and are made by hams. Our Administration don't have any plans for reduce the code speed exam requirements in this moment."

"We had our 5th Congress last March with the participation of more that 100 delegates from all our Radio Clubs. In some of the Committees the code matter was discussed and we decided there to discuss with the Radio Administration the possibility of have some kind of no-code license for little segments of some HF bands. But agreed in maintain the CW as a requirements for most of the ham Licenses."

"The Amateur Service in Cuba is growing and fast. For example, in 1993 we were 1,139 hams in Cuba now we are 2,188. More than 1,000 new hams in than 5 years, most of them young men and women."

"We think it is important to increase the participation of the hams in the life of the community. Not only during the storms or disasters, but always. We have worked in this direction and have win in members and in public position among the people." ***[Submitted by Oscar Morales Jr. CO2OJ, General Secretary FRC, Federacion de Radioaficionados de Cuba.]***

---

**CYPRUS – "About 900 licenses have been issued in total.** If you remove the ones we know for sure have left the island, the silent keys, those who are inactive, about 600 remain. But I think that only about 200 renew their license every year and from those only 90 or so have some form of involvement in Amateur Radio."

"Two license classes are conferred by a CEPT-based exam. The Morse code requirement is 12 wpm. There are no plans to lower the code speed, but if CEPT agrees on a lower speed, we will definitely adopt it."

"We would prefer to abolish the code for a new entry level license that gives access to the Amateur bands. Code could be used for more privileges for a new higher class. Keep in mind that in a small place like Cyprus, there are other practical difficulties with the Morse test. The only official Government Morse code examination center has been closed and the Ministry of Communications cannot currently administer a Morse test. So currently, no new HF licenses can be issued. In fact, the only new licenses issued during the last 2 - 3 years have been to foreign licensed amateurs who became permanent residents of Cyprus. We are working with the ministry in order to establish some kind of volunteer examiner procedure so that some of our more proficient members can administer the exam."

"Amateur radio in Cyprus is shrinking. We hope will have a written exam test at the end of September so that at least some VHF licenses (5B8) can be issued. There are about 15 people (mostly teenagers) who want to take the exam. The CARS president and secretary of many years have both stepped down in an effort to bring new blood into the society in the hope of making it bloom once again We are currently carrying out big re-organization efforts in Cyprus as the last few years we have been losing our members to the Internet and other hobbies.. Sad to say we have achieved very little but we are working on it." *[Submitted by Spyros Stavrinides 5B4MF, CARS Secretary]*

---

**EGYPT – There are 42 radio amateurs in Egypt and three license classes.** Third Class (30 watts), Second Class (50 watts) and First Class (up tp 250 watts.) Two code speeds: 3rd Class 5 wpm, 1st Class 18 wpm. "Most [amateurs] like CW but believe it should be optional and not be an examination requirement." Amateur radio is not growing in Egypt as "...it is very costly to get radio sets. We have no place to buy [them.] We try to collect from abroad, especially the states with friends coming to SU-land." ***[Submitted by Ezzat Sayed Ramadan, SU1ER, IARU Liaison]***

---

**ESTONIA – "There are 624 valid licenses including 7 club stations**. Four license classes: A, B, C and T. A and B corresponds to CEPT1. C and T to CEPT2. Our examinations are in accordance with HAREC [European standard]. Morse code exam speeds: Class A - 16 wpm, Class B - 12 wpm, Class C - 8 wpm, Class T - none (VHF only). Our ministry plans to reduce the code requirements to Class A 12 wpm, Class B and C 5 wpm. We believe Morse code examinations are absolutely necessary. Our Amateur Service is growing slowly." ***[Submitted by Tiit Praks ES7RE, president of the national society ERAU.]***

---

**FIJI - has just about no new ham radio activity** – R. Northcott, president of the *Fiji Amateur Radio Association* says that there are about 13 licensed ham operators in Fiji. "We have a lot of temporary operators who come in on holiday, stay for about three weeks and then go home. We do not count them, in fact we seldom know whether they operate or not."

Fiji recognizes the Amateur examination overseen by the UK's London City and Guilds. "We tried for a number of years to get the authority to set up our own examinations but this has never been done. Most persons who get a license here in Fiji come in with an overseas call and are given a 3D2 call on payment of a fee."

"If a person passes the London City and Guilds exam they then sit for a Morse test of 12 wpm. But I do not think anyone has done this for some years. 3D2AG obtained his license here in Fiji, maybe he was the last one." Fiji has no plans to reduce or change the Morse code requirement. "I think the Authority here will probably follow the lead of New Zealand. With so few persons actually sitting for the Amateur exams here I

doubt if the Authority has even given it a thought." *[Submitted by 3D2CM, Pres FARA]*

---

**FINLAND – There are about six thousand licensed ham operators in Finland,** about 5,100 of which belong to the national league, SRAL. There are four license classes in Finland: The General Class is similar to our Extra Class: i.e: all band and all privileges. The Elementary Class permits 100 watts on most HF/VHF bands. The Technical class is VHF only on all VHF bands and higher power. The Telecommunication class offers only 2 meters and 70 cm at low power.

The examination requirements are basically the same as the HAREC (Harmonized Amateur Radio Certificate.) All classes must pass "Module K", which is the regulations and basic knowledge of making a QSO. "Module T1", basic, must be passed to hold the Elementary and Telecommunications class. The General and Technical classes must pass "Module T2" which requires more technical knowledge. The CW requirement for the Elementary class ("Module CW1") is 8 wpm; for the General class ("Module CW2") at 12 wpm. There are no plans in Finland to reduce these requirements.

There is a very slight decrease in Amateur Radio popularity in Finland which is being responded to with "campaigns." *[Submitted by Jari, OH2BU]*

---

**GIBRALTAR – has 15 licensed ham operators.** There are two license classes: A and B. Class B. allows operation on VHF and higher frequencies only with a call sign prefix of ZB0. The "A" class allows access to both HF and VHF/higher frequency bands with a call sign prefix of ZB2.

There are only two examinations. The "A" class requires passing the Radio Amateurs Examination (RAE) Certificate and Morse at 12 words per minute. The "B" Class requires only the RAE. Like the United Kingdom, Gibraltar will shortly be introducing a new kind of license called the A/B with a requirement on Morse of 5 words per minute. "We think that Morse should be taken out completely."

"Amateur Radio is not growing in Gibraltar. Like all other societies we are not getting any new operators into the hobby. Hopefully with this new license we shall see a few of the B Class upgrading and making it more accessible to newcomers."

"We think that the hobby has suffered tremendously due to the home PC, especially with E-mail. We sincerely hope that the Morse will soon be no longer a requirement in obtaining a license and look forward to the near future when this becomes a reality. There is really no need for Morse today. It has become a mode of transmission like any other. We urgently need new operators or we fear that we shall soon lose some of the bandwidth through this." *[Submitted by Wilfred Guerrero ZB2IB, Secretary of Gibraltar Amateur Radio Association.]*

---

**GREECE – has about 5000 ham operators** and three license classes: A, B and C - (C is the entry level.) "The code requirement at the entry level is 8 wpm. Written examinations are on basic electronics and telecommunication rules. There is no indication about reducing the code speed. We consider Morse code as a useful knowledge. The Amateur Service in Greece is growing at about 250 licensees yearly." *[Submitted by Manos G. Darkadakis SV1IW, RAAG General Secretary]*

---

**HONG KONG – VR2JA writes that "The latest complete figures I have are for the end of July 1998** - 1473 amateur station licenses (of which 12 are club stations), and 1508 operator licenses. The average increase in licensees is about 50 per year, so there should be approximately 1560 licensed operators in Hong Kong at present."

"There are two license classes, Full and Restricted (VHF only). As of July 1998 there were 333 Full class licensed operators and 1175 Restricted class operators."

"A single written examination covers all aspects of radio theory, regulations and operation which is based on the British RAE. Both Full and Restricted licensees must pass the written exam which is administered twice a year by the Hong Kong Examinations Authority. There is a single 12 wpm receiving and sending test required for Full class licensees. The test is offered once a month by Hong Kong's Telecommunications Authority. No changes in the code speed exam are planned."

"Our HARTS committee has not discussed the future need for manual Morse code proficiency and there have been no suggestions from the membership. The primary reason for this is that the Telecommunications Authority (OFTA) in Hong Kong has promised to meet and discuss such issues with the HARTS committee, but they have refused to set a date and actually meet for the past four years. So, since we have no chance for input to the OFTA, there doesn't seem to be much point in discussing the issue among ourselves at this time."

"The Amateur Service is growing very slowly, about 50 per year (just over 3%). HARTS is trying to increase publicity about amateur radio especially through public service, and some ham clubs offer classes and demonstrations."

"Until HARTS can forge a good working relationship with OFTA, there is little expectation of change. At present HK hams do not have full access to several VHF/UHF bands (50.0-51.5 only, 144-146, 430-431, 435-436, 437-437.2, no 1.2 GHz, no 2.4 GHz, 5.725-5.850 GHz, no 10 GHZ, 24 GHz and up), so Restricted class licensees are truly restricted in what they can do, especially in regard to satellites." *[Submitted by Jim Nelson VR2JA and Steven Cheng, VR2YFF.]*

---

**HUNGARY – "Replying your inquiry on the status of amateur radio in Hungary** we inform you that in October a departmental order on amateur radio regulation will be issued. It will be the first self-contained ministry decree in Hungary regulating exclusively the amateur radio service."

"There are about 8500 licensed radio amateurs in Hungary. If we add amateurs operating at club stations, but having no licenses, the number is about 9000. There are 2 license classes: CEPT A and CEPT B in accordance with CEPT Recommendation TR 61-01. Each class has 3 license categories: "A" (similar to your Novice) in accordance with ERC Report 32, "B" (similar to your General/Advanced) and "C" (similar to your Extra). The basic difference between the classes is that CEPT B license holders are entitled to operate only above 30 MHz [and] don't have to pass Morse code. They can upgrade, however, to CEPT B class (retaining the original category) by passing the Morse code examination."

"The written examination requirements are fully harmonized with HAREC, CEPT Recommendation TR-61-02. The "A" license requires 6 WPM, "B" license 12 WPM, "C" license 16 WPM. When we harmonized the Morse code examination with HAREC, the reduction of the code speed was necessary only at the "C" category exam, where originally 18 WPM was required in Hungary and now it is 16 WPM. In the future we keep following the HAREC. We are stanch advocates of the need for manual Morse code proficiency to obtain short wave (below 30 MHz) licenses."

"As for the technical/operational level, amateur radio is growing in Hungary, as to the number of radio amateurs, it is

sort of stagnant. At present we don't have a real good idea how to solve this problem, it is too complex [with the] end of previous government subsidies, a wide variety of competitive other hobbies for youngsters, EMC problems, accelerated lifestyles, increased work duties, disinterest of media, practically no chance to compete with industry neither in equipment construction, nor in the invention of striking new techniques etc."

"The most important thing is to find way and language of propaganda to approach and attract to our ranks the young population." ***[Submitted by Laszlo Berzsenyi, HA5EA, President of MRASZ]***

---

**INDONESIA – has a very sophisticated licensing arrangement.** According to YBØEBS, "the total amount of active Amateur Radio in Indonesia is decreasing very rapidly. Latest number registered is not more than 90,000. Basic reason for the decrease is the present monetary and economic crisis of the country."

"There are four ham classes in Indonesia, VHF, Novice, General and Advanced.. The minimum age is 14 years and all applicants must be in possession of a certificate of good conduct issued by the police department. The "YH" prefixed (No Code) Class ( one year license) permits VHF and higher frequency operation. The "YD" and "YG" Novice Class permits CW operation on 20 meters and phone on 80 meters with 10 watt power. Passing a 5 wpm Morse exam is required. This is a three year license. Only domestic communications are permitted to the "YD," "YG" or "YH" class.

The YC and YF General Class (a five year license) may operate on all bands except 20 meters with a 25 watt power level. (8 wpm code requirement.) The "YB" and "YE" Advanced Class has all Amateur Radio privileges with a 500 watt permissible output. (12 wpm code requirement.) International communications are permitted by YB, YC, YE and YF holders.

YBØEBS writes that "I am myself an old-timer keyer and enjoy very much Morse code communications and I believe with simple home-brewed transceiver the code utilization in Indonesia will be much more practical and economical to most of the Amateur Radio in this country. Personally I do not know how long this country will be able to overcome the economic and monetary crisis which will enable most of the Amateurs to get sophisticated gears." ***[Submitted by Ben Samsu, YBØEBS, Organisai Amatir Radio Indonesia]***

---

**ISRAEL – "Depending how you look at it, on the ministries files more than 1600 are registered.** But that includes all calls that have been given and do not take into consideration persons that have passed away or left the hobby in any other way. (750 are registered as being a member of our Amateur radio club.)"

"We have four license classes: "A" Advanced/Extra (18 wpm code), "G" General (12 wpm code), "N" Novice (6 wpm code) and "T" Technical (no code.) The written examination syllabus follows the CEPT requirements. Our ministry will decide the future of the CW requirements. We have heated discussions among the radioamateurs [and] the consensus is to keep the requirements as is. We are also waiting the outcome of the IARU and WRC decisions."

"Amateur radio growth remains static at best. We are trying to promote it in schools and community centers. Shalom from Israel." ***[Submitted by Joseph Obstfeld 4X4KJ, IARU Liaison Officer.]***

---

**ITALY - Mario I1MQP writes that there are between 23 and 25 thousand radioamateurs in Italy.** "We have two classes: 1st class full licence HF and VHF and up -and- 2nd class license only VHF and up. The "...quiz examination is based on electronics and regulations. It consists of 15 questions and you must reply correctly at least to 12 of them."

The Morse examination is "...8 groups of 5 characters per minute for a period of 6 minutes. Maximum number of mistakes is 5. A complete group that is not copied is considered as 2 mistakes." (40 characters in one minute would be 8 words-per-minute.) There are no plans to change or reduce the examination requirements.

The Amateur Service is not growing in Italy. "We have been losing about 3 to 4% a year over the past three years. A program is underway to give presentations and examples of radio operations in schools, exhibitions, fairs and so on. We are trying to have more space in the national press."

"[The] Internet, Cellular Phones and Satellite TV are making our hobby less interesting from a technical point of view. Getting in the WEB is very easy, not expensive and can be done without any examination. Calling by phone the other side of the world is done by everybody without any problem. Satellite TV gives you access to all the world."

"Thirty years ago my friends were impressed by the fact I was talking daily to Russia and America, today they could not care less." ***[Submitted by Mario, I2MQP]***

---

**KENYA - Ted, 5Z4NU of the Amateur Radio Society of Kenya says that** "The Licensing Authority here has been unable for the past five years to give us a figure for the number of current licenses. My best count is about 35 to 40, but it could be more or less. Around 80 callsigns are on the books but about half have lapsed. Of these only about 10 or 12 are at all active. Several have left the country. We know of most licensees but possibly not all."

"There are three license classes in Kenya: Full, Intermediate (no code and reduced power); and Novice. Usually the British RAE (Radio Amateur's Examination) is required, set and administered by the City & Guilds of London Institute, which has an office in Nairobi. Other RAEs can be considered on their merits, such as the FCC RAEs. Only Kenya citizens can get a license here by taking the RAE - all non-citizens must be licensees of their own country and for which Kenya must have a reciprocal Agreement."

There is only one code examination speed in Kenya, 12 wpm. "Our conservative Authority has made no legal changes since about 1948 and seems unlikely to do so now, although privatization may alter their thinking - but we are not holding our breath. The Radio Regulations have been under review, and we have submitted our suggestions."

Ted said ham radio in Kenya is not growing. "The Authority is unable to carry out Morse tests itself, so anyone wanting to take one has to go to UK or South Africa or some other acceptable place. Most local people, both private and official, equate amateur radio with spying for 'colonialists' or some such silly fantasy, typical of the arrogance of ignorance, and this attitude is hard to change. We have been active at a few disasters, like the last serious train crash, to provide essential communications, and that has helped. We now have more recognition from officialdom and are no longer considered to be major security risks by the National Security Intelligence Service. A strong move to interest the Boy Scouts & Girl Guides simply left us paying lots of money for QSL cards, laying out a great deal of effort by private members for JOTA stations and the like, while the Scouts have taken all they can get and then just forgotten about it. This is being taken up in the hopes of

improving the situation. Our presence at Computer Shows has recently shown a good input of new members (like six or seven!) and a few are studying for the RAE. But I see I see only minimal growth in the near future."

"The Novice Exam is administered and set by the ARSK on behalf of the Communications Commission of Kenya (CCK). We have had three quite active Novices licensed but the scheme has not gone very far, mainly due to disinterest on the one hand and financial stringency on the other. We help out as far as we can with equipment loans. Total cost of the Manual and exam is K.Shs. 100 (about US$1.35), and they charge nothing for the Novice license at present. We cannot improve much on that!"

"Presently all US citizen licensees wanting new licenses are unable to get them. The Kenya Authority insists on having a Reciprocal Agreement, which will definitely be granted immediately on written application direct to the CCK. The FCC is legally precluded from doing this and the State Department will deal directly only with the Ministry of Foreign Affairs or possibly the Ministry of Transport and Communications. Our Ministry says the matter is technical, not political, and MUST be dealt with only between the CCK and the other radio licensing authority. They will not even forward a letter of request sent through their office. So there we have total stalemate. The US Embassy in Nairobi has been trying hard to find a way round the impasse for some two years without success. The DoS is even more adamant than our Ministry, to the detriment really only of their own citizens."

"Since U.S. licensees have made up the majority of local amateurs in recent years this problem has dealt us a very serious blow. For every one who leaves, there is no replacement. Thankfully U.S. citizens already holding Kenya licenses have been permitted to continue. As stated, Kenya will instantly grant a Reciprocal on request, but DoS will not make the request in the way required! Kenyans can still, of course, get a U.S. license by taking and passing the FCC exam - sadly our Authority will not permit this method to non-citizens." ***[Submitted by Ted Alleyne, 5Z4NU, Hon. Secretary, ARSK]***

---

**KOREA – We received a response,** but unfortunately the writer apparently used a Korean alphabet PC and much was unreadable. But we were able to determine that (as of the end of June 1999) there are 52,985 ham stations in Korea of which 17,152 are members of the Korean Amateur Radio League. Korea has three license classes (Class 1, 2 and 3) each with two categories: Phone and CW.

---

**LEBANON – "There are 206 licensed radio amateurs in Lebanon,** but only 60 are members of the national Association. We have only 2 license classes; the Radio Telephony and the Radio Telegraphy/Telephony. The written examination requirements includes basic electricity and electronics, Tx/Rx circuits, aerials, radio waves, propagation, radio regulations. The Morse code exam is at 10 wpm, transmission and reception."

"We are of the opinion to maintain the Morse code application amongst amateurs who are genuinely interested in it without imposing it on those who are not. This way we do not deprive those who have other ambitions and interests in other radio telecommunication modes from becoming RadioTelephony and Digital radio hams."

"Moreover, in this Internet era, any new tight restriction on newcomers would deter the young generations from joining the radio train, also we believe that there is ample spectrum space to satisfy the requirements, experiments and enjoyment of all hams in various radio modes."

"Unfortunately, Amateur Radio is not growing in Lebanon. Our association is encouraging the public but most particularly the Colleges' student by organizing lectures, participating in Telecommunication exhibitions, publishing articles in the daily newspapers in addition to TV interviews to promote the hobby. ***[Submitted by Jamil Sayegh, OD5PN, Association of the Radio Amateurs in Lebanon (RAL)]***

---

**LITHUANIA – has about 1000 licensed radio amateurs** and three license classes. Class A (corresponds to CEPT Class I, all band/mode), Class B (corresponds to CEPT Class II, VHF/UHF) and a national Novice Class C.

Class C permits domestic 100W communications on portions of 4 HF bands (80, 40, 15, 10m) and 50W on 2m, 70cm and 23cm. All examinations are according to the TR61/02 (HAREC) recommendations. Persons younger than 16 years may hold only the Class C license with parents agreement.

Class A applicants must take a Morse code examination (receiving and transmitting) at 12 wpm. Disabled persons and persons older than 50 years are exempt from Morse exams. "Our Amateur Service is growing. We are preparing our views on the future need for manual Morse examinations for the IARU Reg. I Conference in Lillehamer (Norway) this autumn."

Class "A" operators who have good technical basis, continually win contests and observe amateur radio ethic rules, through the mediation of Lithuanian Amateur Radio Society (LRMD) can apply for a 4 letter contest callsign. This callsign is confirmed by LRMD and prolonged every year."

***[Submitted by Valdas Slezas, LY1BA, Chairman LRMD and Antanas Zdramys, LY1DL, Secretary and IARU liaison.]***

---

**MALAYSIA - has about 500 amateur radio operators.** "We have two license classes, "A" (all bands) and "B" (VHF 2 meters only.) Requirement for the "A" class is to pass a theory exam and Morse code at 12 wpm. The "B" class requires only passing the theory exam with callsign starting with 9W2. Our written exam has covers questions similar to RSGB [Radio Society of Great Britain] but with strong Malaysian content."

"Our Society successfully convinced the telecom authority to introduce the "B" class license which began last year. We believe the current Morse test requirements should be maintained."

"We plan to work hand in hand with the government especially the education ministry to introduce this hobby and to encourage younger generations to propagate the hobby into the next millennium." ***[Submitted by Thiam Chee Ming 9M2CJ, Sec. Malaysian Amateur Radio Transmitters."***

---

**MEXICO - Growth has been stalled...** – XE1FOX estimates that there are 8,000 licensed amateurs in Mexico. "We have four license classes: Class I, Class II, Novice and Restricted." In addition to written tests, 10 wpm Morse code is required for the First Class License and 7 wpm for the Second Class. "No code tests for Novice and Restricted licenses. ...There are no current plans on the part of the Comision Federal de Telecomunicaciones to reduce code speeds as far as we know."

"The growth of head count in Mexico has stalled for the past couple of years, this can be attributed to several factors, including the economic (most importantly) as well as the competing factors such as cellular telephone service and the Internet. FMRE is dealing with it currently with the authorities, in order to implement measures that have been adopted in other countries, such as VE programs, in order to come closer to

**W5YI REPORT**
America's Oldest Ham Radio Newsletter

**ADDENDUM**

Page 1
September 15, 1999

# LATE BULLETIN: Additional countries, just received!

**GERMANY – "There are about 80,336 Amateur Radio licenses issued in Germany;** 55,555 are members of the German Amateur Radio Club (DARC). We have 3 license classes in Germany. Class 1 (36,263 DARC members), 2 (18,437) and 3 (855)."

"The Morse code examination requirements for Amateur Radio licenses Class 1 are 60 characters per minute (12 wpm). There are no Morse code requirements for the Class 2 and 3."

"The number of issued Amateur Radio license has been quiet stable in recent years. The German Ministry of Communication issued the new Amateur Radio Class 3 which is a class limited to 2 m and 70 cm are with a maximum output of 10 W EIRP to get especially young children into the hobby of Amateur Radio. ***"Submitted by: Stefan Bauer DL1FDF, Technical Assistant."***

---

**ICELAND – There are about 120 Amateur Radio operators in Iceland, maybe 60 are active.** We have five license classes: Novice (QRP CW only), Class A (CW only, limited power), Class B (CW/Phone, more power), Class C (All modes, still more power), and Class T (VHF and up, limited power).

"A 40 percent pass gives 40% gives N-rights, 60% gives the A or T. There is a special exam for C, 50% pass. Morse code: 5 wpm for Novice, 13 wpm for A and 18 wpm for C. Test is sent for 5 minutes, hand written, 8 errors allowed in reception, no error in transmission. Text sent is random character groups of 5, letters and numbers not mixed."

"We are proposing reduced code speed and also fewer license classes. What is talked about now is to implement Farnsworth method, General class would be abt 4-5 wpm with character speed of perhaps 20-25 wpm."

"Our views on the need for manual Morse code proficiency and examinations are very mixed indeed, but the majority seems to want some low speed test."

"Amateur radio is growing in Iceland. By offering attractive courses, group activity and club activity we seem to attract newcomers to hamming." ***[Submitted by Vilhjálmur Í. Sigurjónsson, TF3VS]***

---

**THAILAND – "At last count Thailand had, 141,241 licensed operators, 50,914 individual stations and 74 club stations.** There are three license classes: Novice, Intermediate and Advanced."

"Examinations: written multiple choice exam on theory and operating regulations. For HF operating (below 30 MHz) 8 wpm (Advanced Class) and 5 wpm (Intermediate Class: International Morse code. (Thai-language Morse is not a requirement)."

"Initially, the speed had been set at 8 wpm, but later a 5 wpm test was introduced for Intermediate Class operators. We believe Morse code testing should remain a requirement for the time being."

"The Amateur Service in Thailand is growing, although the economic downturn in the region has had an impact and has slowed the expansion."

"Amateur radio is relatively young in Thailand, with laws governing the activity only passed in 1987. Most of the activity is on VHF and amateurs here have had a different introduction to amateur radio operating than in many countries, since the private ownership of radios with BFOs or SSB detectors without a license (such as an amateur radio license) is illegal."

"Hence, the casual monitoring of HF ham transmissions has not been the reason why Thais have become interested in shortwave radio or DX, and after beginning on VHF, many do not graduate to HF. There is little or no exposure to such activity as technically, in Thailand would-be hams have to take and pass the examination before they can even listen to CW or SSB on the HF bands."

"The activity is heavily regulated here when compared with most other countries, and this tends to stifle potential growth. There are three CB bands and this also siphons off many potential licensed radio hams."

"Inevitably, easy accessibility of the Internet and availability of computers must divert many potential radio amateurs, although there is always the possibility that some who might otherwise not have been interested in technology will be sufficiently intrigued by Internet communications to explore amateur radio communications as well." ***[Submitted by Tony Waltham HSØ/G4UAV.]***

---

**[Editor's Note: We sent two inquiries to the RSGB, the *Radio Society of Great Britain.* Neither were answered or even acknowledged. So we sent an inquiry to the UK's other Amateur Radio association, the UKRS, *United Kingdom Radio Society* and got an immediate response. Formed in 1996, the UKRS is not the IARU recognized national society of the United Kingdom and is a much smaller organization. They have a website at: <http://www.ukrs.org>]**

---

**UNITED KINGDOM – "Neither UKRS nor I have much to say about how RSGB does its business,** although I am a member of it. I do think it's a bit poor that RSGB hasn't replied to you though. I hope you won't judge all UK Amateurs by RSGB standards! It's largely because so many of us aren't happy with the way it goes that we formed UKRS in the first place."

"Our Licensing Authority, the 'Radiocommunications Agency' advise that there are approximately 61,000 Amateur

licenses currently issued. We don't know how many of those are actually active these days or just renew their license for the sake of keeping them current. Also, a small percentage of them will be held by the same individuals. For example, one amateur could hold two or three licenses on behalf of clubs, etc., as well as his own - and some UK licensees have 2, sometimes 3 different grade Licenses current."

"We have five license classes now:

[1] Full "A" (HF) which included the 12wpm Morse test

[2] Full "B" (no HF) which is same written papers but no Morse test

[3] Novice "A" which have less privileges but some HF access because they did a simpler Morse test

[4] Novice "B" - same restrictions as [3] plus no HF access because no Morse test involved

[5] New "M5xxx" Licence. Much derided and very controversial. Recently introduced so allow group [2] licensees some HF access with restricted power if pass a 5 wpm Morse test."

"Written examination requirements: [1] and [2] need to pass both of two multiple choice papers. Only difference is Morse test at 12wpm to upgrade from [2] to [1]. Candidates need to pass both papers. Can carry one pass forward and resit the failed paper if necessary."

"[3] and [4] need take a measured course of instruction - I think it is 30 hours overall - and pass a simpler written examination. Must also produce 'very' simple construction project."

"Papers for [1] and [2] organized by City and guilds of London Institute - one of the main UK examination bodies. Exams on first Monday of May and December annually only. Papers for [3] and [4] organized by RSGB 'under license'"

"Morse examination requirements: For [1] above, a 12 wpm test supervised by RSGB voluntary examiners. Approximate 1.5 minutes receive, if I recall correctly, and a short QSO-type paragraph to test receive. Limited number of corrected errors allowed on transmit but one uncorrected error fails. Limited number of uncorrected errors on receive; 5th error on receive fails. Candidate must pass both parts."

"The Radiocommunication Agency, heavily influenced by RSGB, recently introduced the M5xxx Licence with 5wpm test speed. Is also claiming that Morse test requirement at HF 'will' be abandoned by WARC."

"Both RSGB and RA publicly claim that an overwhelming number of UK Amateurs are in favor of dropping the international Morse requirement. Only UKRS has done any serious research. We have polled every single UKRS member on the question. We consider our members to be representative of all UK Amateurs and can see no reason why they wouldn't be."

"Our findings over last four years have been consistent. Fifty-one per cent of Amateurs express a preference favor [of] retaining [the] Morse requirement; 49 per cent in favor of dropping it. Balance has never shifted by more than 1-2 per cent either way."

"Interestingly, a large number - some two thirds - of those in favor of dropping the requirement have added the rider that it must be replaced by some other test, so as to maintain the different grades of license. 'Incentive Licensing Scheme' idea is gaining considerable support and the US model is often cited as a preferred example."

It is difficult to get a straight answer on UK Amateur Radio growth from the authorities but analysis of historical figures suggests it is either remaining static or declining slightly."

"General perception among Amateurs about what is being done about that is that entry standards are being reduced to encourage new blood into the hobby. Not a popular perception. Difficult to do much about it yet because RSGB and RA, in addition to misrepresenting the position about Amateurs' preferences are also claiming to have conducted 'extensive research.' No-one has been able to duplicate that research and no-one has been willing to admit having been involved in it!"

"UKRS is currently challenging the UK Authorities to stop misrepresenting the position and, additionally, to 'prove' its research by revealing facts and figures. This is on-going, as of last couple of months, so too early yet to be specific about effects or project likely outcome. It 'is' a serious challenge, however, on behalf of several hundreds of Amateurs involved and many more sitting on the sidelines, too discouraged by years of frustration to do much positive for themselves. UKRS is finding more and more coming on board to support the challenge, however."

"The challenge may end up with UK Government or in UK Legal system. Can't really say much more about that yet for fear of misleading anyone so probably best to say 'watch this space'."

"As part of RSGB and RA 'hype' UK Amateurs are being told that WARC delegates 'will' vote for abolition of Morse requirement in 2002/2003. UKRS currently researching other nations' views (much as you are doing?) and is finding no such prognosis. Most so far seem to be in same position as UK, with Amateurs feeling much the same and administrations believed to be lining-up to represent either that (neutral) view or a vote to retain the test requirement. Again though, our research is a long way short of complete."

"I should add that UKRS as a Society has no fixed view. It genuinely does have a history of digging-out Amateurs' own feelings and pressing for them rather than inflicting its own ideas on Amateur world. We will be happy to go with whatever the majority of members decide - provided only that they do get a chance to have a say and have the proper facts before them when they are asked." *[Submitted by Greg, GØMAM, United Kingdom Radio Society]*

Amateur Radio prospects."

"Mexico has been going through a difficult stage during the past couple of years, such as an authority change, from the formerly Secretaria de Comunicaciones y Transportes (a ministry or "Department" in the U.S.) to the current Comisión Federal de Telecomunicaciones (similar to the FCC in the US), an autonomous commission whose Director is appointed by the President. This has caused the largest historic delay in Amateur Radio services such as new licenses issued, renewals, address changes, mobile station changes, etc. Also, due to this fact, the Amateurs database is not duly updated (they have not been able to integrate the databases from the rest of the country where the SCT is still in command).

Additionally, other important subjects such as a new set of rules that contemplate digital modes, and subjects such as code proficiency and license restructuring and other updates have been delayed. This is slowly but surely catching up." ***[Submitted by Carlos F. Narvaez, XE1FOX, Federacion Mexicana de Radio Experimentadores (FMRE)]***

---

**MAURITIUS – "There are about 41 licensed operators here** but many are not active or have no equipment," 3B8CF said. "I can safely say that only about 10 are active. There is only one class of license which is equivalent to the full UK license."

"Radio Amateur examinations are no longer held and now prospective Amateurs must sit for the City and Guilds of London examinations. Fortunately this certificate is recognized by the Mauritius Telecoms Authority to issue a License. The weak point in this is that candidates must learn many regulations which concern the UK only and also the cost to sit for that exam is very high."

"The Morse code requirement is 12 WPM , same as in UK. The speed has not been reduced and the Mauritius Amateur Society has made some propositions to the Authorities (our local FCC), but no reply has been received up to now."

"So long as Morse proficiency is an international requirement, we have to abide by it; but we do not think that it is REALLY needed to become a ham. Personally I am 99 % QRV on cw but I feel that the use of CW should be left to individual taste and not be made a requirement to obtain a license."

"The Amateur population here is not growing . The radio amateur license in its present form does not meet the needs of a modern Mauritius and there has been no new young persons receiving a radio amateur license lately."

"MARS has proposed to the Mauritius Telecoms Authority that a Novice VHF 144-146 MHz only license be established. The assessment of the candidate would be accomplished by volunteer examiners from the local radio society. This class of amateur would be identified by the letter "V" as the first letter in the suffix. 3B8VXX." ***[Submitted by Seewoosankar Mandary (Jacky ) 3B8CF, Secretary , Mauritius Amateur Radio Society]***

---

**NAMIBIA – The future looks gloomy."** – The Namibian Amateur Radio League reports that there are about 100 licensed radio amateurs in Namibia. (16 restricted to VHF/UHF and 84 unrestricted: all bands 160 meters and higher.) "Both classes write the same examination which complies with that of the European Union. To obtain an unrestricted licence you must pass the Morse test at 12 wpm, sending and receiving."

"There will always be a need for Morse code -- for example in emergency situations when propagation is poor. Being able to read Morse code puts the cherry on top of being an Amateur Radio Operator. Having been a professional Radio Operator for many years I suppose I am biased!"

"Amateur Radio is progressing very slowly. Namibia being a third world country, at this stage Amateur Radio does not have a high priority. Having a population who are 100% literate tops the list."

"The future of Amateur Radio looks gloomy. I feel that the Internet is the favorite communications hobby of the young people of today. The solution? That is the 64000 dollar question." ***[Submitted by Ian Sutherland V51C, NARL]***

---

**NETHERLANDS -- There are about 15,000 amateur radio operators in the Netherlands,** including about 200 club stations and school stations. Most (about 11,000) belong to VERON, *Vereniging voor Experimenteel Radio Onderzoek in Nederland*

There are three licence classes. Class "A" is a full class (CEPT class 1) including HF. Class "C" is for VHF (from 50 MHz on) and higher, all mode (CEPT class 2). Class "N" is a Novice license for 2 meter and 70 cm operation on special band segments.

"The written examinations are held twice a year and are comparable to the CEPT T/R 61-02 recommendation (HAREC). The current Morse code [requirement] for the "A" license is manual receive and send at 12 wpm.

"In the Netherlands the majority of the radio amateurs still think the code is necessary for access to HF, although the majority is decreasing by the year. In the past years there is no growth of the amateur population in the Netherlands. The policy of the VERON, the biggest society of radio amateurs in the Netherlands is making policy to reach the youth at (technical) schools, fairs etc." ***[Submitted by Kees Murre PA2CHM, IARU liaison officer for VERON.]***

---

**NORWAY – There are about 5000 Amateur Radio operators in Norway** and three license classes: Class A/General, Class B/Novice and Class C/Technical. There is a written examination in technical, regulatory and operational proficiency. The Morse code requirements are 60 characters per minute (12 wpm) for Class A and 40 characters per minute (8 wpm) for Class B. Class C is a no code license. There are no plans to reduce the telegraphy requirements in Norway. NRRL says their Amateur Service is not growing. ***[Submitted by the Norsk Radio Relæ Liga]***

---

**PANAMA - "We need to redefine Amateur Radio." –** There are about 2000 Amateur Radio operators in the Republic of Panama divided among the license classes: Advanced: (All bands with 1000 watts maximum output power), General: (All bands with 500 watts maximum output power) and Novician: (40m, 80m, 160m and 2m bands with 100 watts maximum output power.)

"The written exam has about 60 questions which covers radio technics, legal regulations and amateur radio subjects. Our current Morse code examination requires to be able to transmit and receive 5 words per minute."

"Panama has not reduced the code speed exam requirements during the last 15 years, since there are many operating this mode, examinators are very flexibles with exam, however. I don´t think there is a future need for a manual Morse code."

"The Amateur Service is really not growing here. Many people have abandoned or changed the amateur bands for Internet and cellular telephone. I think these people are not real hams. They have mistaken the hobby. Liga Panameña de Radioaficionados is promoting radio contests, field days for hams and not hams, collaboration in civilian activities, every two month´s reunion held in different cities of the country, the

annual dinner for amateurs and non-amateurs people, fair participation to expos our rigs, pictures and videos about our activities. We try to plant the amateur radio seed on new people (our sons, our friends and the sons of our friends). We try to become Amateur Radio in a true family."

"I suppose that similar to 50 or 60 years ago, when technology advanced, was the need to create new regulations or rules because there came up new bands and users. Today we should think on redefining the Amateur Radio function because currently we have new technology that enables other types and modes of communication among people." ***[Submitted by Jose Garcia Alvarez, HP8AJT, President L.P.R.A., Liga Panameña de Radioaficionados]***

---

**PAPUA NEW GUINEA (PNG) – "Much of what happens in PNG is quite informal,** and this certainly extends into AR which is not a common hobby for Papua New Guinean people. A working interest in technology is almost a necessary pre-requisite for any national to continue on into AR. Our biggest representative group is therefore expatriate persons under contract to work here."

"As you may know, PNG was a protectorate of both Australia (southern part of the country) and the United nations (northern part and islands). The north was originally governed by the Germans but this ceased when WW 1 began. Since independence in 1975, the number of expatriates in the country has steadily decreased and the population of amateurs has followed this trend. Most national license holders were within one of three government departments, Telikom, ELCOM and Civil Aviation, these representing the most technical areas of activity."

"In the early 70's approximately 300+ amateur licenses were issued, this has now fallen to just over 100 and I would estimate the active members may constitute 50% of that. The Amateur Radio Society was formed almost personally by Jim Smith and a few others. Jim moved to Norfolk Island in the late 70's and the society has continued on in one way or another."

"At one time, almost all activity centered around Port Moresby, the national capital, but this has also changed and now most activity is from the provinces. In the 70's approximately half the amateur population was in Port Moresby, now half would be in Ukarumpa, a christian-based missionary settlement between Lae and Goroka. There, Americans, Australians and New Zealanders present 53 amateur licenses. I have yet to confirm the actual number registered by PANGTEL (our authority in PNG), but there is unlikely to be more than 120 country wide."

"The number of operators in the country number about 120. We have Novice, Limited, Combined and Full calls which have the following qualifications : Novice - Simple theory exam (multiple choice answers 50 questions) and 5 wpm Morse sending and receiving. Limited - High standard theory examination, no Morse code test at all. Combined - Both qualifications must be passed, and; Full - additionally requires 10 wpm Morse tests sending and receiving. The written exam requirements are in line with Australian levels of testing."

"Morse is currently required for access to HF. 5 wpm Novice and 10 wpm Full call. The PNGARS (the society) has asked that Morse code be eliminated as a qualifier for all HF access. While this is considered ideal, a reduction to 5 wpm is more realistic due to the ITU memorandums already in place and unlikely to be removed for some time. The PANGTEL organization has been considering this for some time, without making a decision."

"The society is divided, but most members, including those already holding a Morse code qualification consider the need for Morse is wrong, as would be the need for specific knowledge of any other communications mode. There is really little evidence to indicate that passing Morse tests leads to a better operator. Many limited licensees have great knowledge of communications and are professionals with far better respect for interference and decent operating procedures. These people are restricted from HF. May operators who have passed Morse tests publicly state that they could use it 'to save their lives', have never used it since the exam and have no intention of ever using it again."

"As in all groups, we have operators who enjoy Morse Code contacts and even those who use it almost exclusively, but to impose it on all is unfair. There is little substitute for it's value in low signal work with moderately complex terminals, but unrestricted digital techniques still surpass it's absolute limits."

"The amateur service is not growing in PNG. We were approached by WIA to assess the situation some years ago and as IARU representative, I wrote in answer. I received no reply and little encouragement from Australian organizations. We did however receive an incredible amount of support from the JARL, who supplied two FT690 radios with power supplies, videos and literature to assist in interesting national people in AR. After several years of attempts it has been found an almost impossible task, however we make an annual attempt to raise the interest of young people by setting up JOTA stations. The scouts appear to offer the best avenue to interest Papua New Guineans. All considered, I would think we are facing great difficulties in creating a PNG amateur population.

"One of the biggest problems in PNG (and probably many other developing nations) is the low standard of facilities and security that people enjoy at home. It may be taken for granted that radio equipment can be secured in a home environment, but this is seldom true. Almost all operations by national amateurs would be done at their working location. There seems little that can be done about this in the short term (10 years).

"Some years ago, about a dozen VHF radios on the local 2M repeater were set up and donated to the most active national amateurs. Activity was low even then and rapidly declined. The reason for this is not known, perhaps PNG people are just shy?

"It seems that AR in PNG is likley to continue, based mainly on expatriate activity. As the value of the national currency falls, there seems less opportunity for nationals to acquire and operate amateur equipment other than through their workplace.

"Some years ago I set up a Port Moresby Club station in Telikom offices. It was adjacent to their training school for telecommunications technicians and power techs. I considered this to be an ideal place to attract even casual interest, but very little was ever achieved!

"The club continues to exist, but is used only for JOTA. I recently discussed some aspects of amateur radio with the executive manager of PANGTEL (now the regulator of all telecommunications in PNG) who is himself still a licensed ham. Paul expressed the hope that he might be able to set up a monitoring station near their head office and that this might re-kindle some of his officers interest in the practical aspects of radio communications. I encouraged him to proceed, but their funds are limited and he will need official support to continue with the idea. I consider it would be well worth combining the Port Moresby Club facilities with theirs should any real progress look like being made.

"I hope you will accept the informality of this reply." ***[Submitted by Rick Warnett P29KFS, IARU rep, Garamut editor, Port***

*Moresby Club founder, ex president of the PNGARS.]*

**SPAIN – "There are 58,000 (Fifty eight thousand) amateurs in Spain** divided among three [license] classes. Class A (General - All bands allowed, 12 wpm code), Class B (Restricted, bands above 30 MHz, no code) and Class C (Novice, portions of 3.5, 7, 21 and 28 MHz, 8 wpm code."

"The examinations require basic knowledge of electricity and radioelectricity, radioamateur regulations, fitting and handling of an amateur station (only theory) and reception and sending of Morse code, except class B."

"In URE we think the Morse must not be mandatory for obtaining an amateur licence. The Amateur Service is decreasing in Spain. We [are] studying several projects, such as the encouragement of our hobby in technical schools, but [no] special action has been taken up to now." ***[Submitted by Angel Padin, EA1QF, External Affairs Manager]***

**SWEDEN – "We have approx. 11,000 licenced operators in Sweden,"** SMØJSM (Eric) said. Eric is the Office Manager of the SSA. About 50% of all Swedish radioamateurs are members of the SSA. We also received a response from Sigge Skarsfjäll, SM5KUX, their HF manager and Gunnar Kvarnefalk, SMØSMK the SSA president.

"Effective April 1, the Morse code examination speed is now 5 words per minute for a Class 1 license, giving access to HF. It used to be 12 wpm. Our official view is that we have accepted the 5 wpm code proficiency test. We are however at this moment not in favor of abolishing the code test altogether, although we know that there are forces working in that direction."

" In preparation for the IARU Region 1 conference, various alternatives are under discussion. However, at the moment we have no decision by the board of directors of the official view of SSA to be presented at the conference. Amateur radio growth here is quite stable, and we have recently started a project to attract younger people to amateur radio."

"The Swedish Telecommunication Authorities decided on new regulations for amateur radio four months ago. There are now two license classes, Class 1 and Class 2. Holders of Class 1 are permitted to use all bands, holders of Class 2 can only use frequencies above 30 MHz. For Class 1 the required Morse speed was reduced from 12 words per-minute (60 char/min), to 5 words per-minute (25 char/min). The Morse examination is done with a character speed of 60 char/min but with a longer space between each character, thus making the average speed 25 char/min. The Class 2 certificate requires no examination in Morse code."

"The text for the Morse examination consists of a typical QSO. The length of each text is about 190 characters both for sending and receiving. In receiving a maximum of 8 errors and 1 underlining (i.e uncertain) are allowed. When sending a maximum of 2 errors and 5 corrected errors is allowed."

"Many holders of Class 2 licences have already passed the new Morse code examination and have received Class 1 licences since the technical examination is the same for both classes."

"The telecom authorities use the keyword 'deregulation'. Soon we are to come to an agreement on other issues which will make amateur radio easier in Sweden, but as yet it is too premature to introduce these issues now."

"For training purposes our Society has been given the possibility of issuing training licenses, the aim of which is to give prospective amateurs a period of time in which to train for their Class 1 and 2 license. The training licenses (with 'SH' calls') are limited to a three year period, i.e. you must upgrade to Class 1 or 2 within three years."

"Class UC permits the license holder to operate on HF after passing the (5 wpm) CW test, but the technical test is slightly easier than Class 1. Class UN which requires the same technical test but no CW (a VHF license). The written examination covers technical matters, interference, security matters, rules and traffic methods, band plans and so on."

"We are planning on a major drive during the year 2000 - coordinating efforts from SSA as a national organization and all member clubs. We have however experienced a growth in membership 1999, mainly due to a campaign that started last December. We are contacting all hams currently not members of the society by mailing one copy of our magazine together with a special introductory rate for the first 15 months. I am very pleased with the results so far."

"We are viewing Internet as an ally to the Amateur Service by combining the speed of news and wealth of information thru Internet with the thrill of making contacts by radio. The amateur community must accept that we are living in a changing world. Maybe our numbers will shrink, but as long as people find it thrilling to contact other people there will always be an amateur fraternity around." ***[Submitted by Eric SMØJSM, Sigge SM5KUX and Gunnar SMØSMK]***

**TAJIKISTAN – There are about 45 stations in Tajikistan** and four license classes: 3,2,1 and Extra All HF. The theory examinations are oral. Class 3 requires no Morse exam – Class 2: 10 wpm., Class 1: 20 wpm and Extra: 25 wpm. "In 1994 [our country] let people get 3 HF class without code."

"[The] number of Amateur [is] reducing. Approximately 200 in 1985 and now less than 60 (1997). Low salary (2-4 USD a month!) and license fee 3 USD a year. TARL could not even pay IARU fee and situation getting very dramatic."

"In Tajikistan situation is not the best unfortunately. Even this level reached by 2-3 volunteers who of course could not pay for the rest of Hams. All was done last 2 - 3 years slowly coming to zero point. (QSL buro, Amateur Radio club, Emergency Situation training center)." ***[Submitted by Nodir M. Tursoon-Zadeh EY8MM, Secretary, TARL.]***

**TRINIDAD AND TOBAGO – does not require telegraphy examinations.** "There are about 425 ham operators licensed in Trinidad and Tobago. We have two license classes: 9Y4xxx requires code, 9Z4xxx is No Code. The written exam for all classes of license is the City and Guilds Amateur Radio Examination."

"Morse code is optional, on passing the City and Guilds exam the individual has a choice of taking the Morse code test, 13 wpm. If successful he is issued a 9Y4xxx call. If he chooses not to take the Morse he is issued a 9Z4xxx call. Both licenses are given full privileges on all the amateur bands. There are no plans at this time to change."

"My view is that proficiency in Morse code should no longer be a requirement, it is a mode like any other and would always be around, more effort should me made to attract young people to amateur radio. Amateur Radio expanded in Trinidad and Tobago when Morse became an option. With the advent of the Internet and the vast improvement in telecommunication it is now imperative that we revisit the purpose for the existence of Amateur Radio Service: 'Experimentation and Investigation.'" ***[Submitted by Noel E Donawa, 9Y4NED, President TTARS]***

**TANZANIA – It is hard to say how many amateurs we have,** because the database of the licensing authority is not absolutely correct. It is not known if many are still in the country. Based on our membership and some guesswork it is something between 35 to 45."

"We have a Novice class for a little bit more than one year. The examination can be done in the country. There is a full class. More or less the only way to get a full license is to obtain a license in a foreign country and apply with this license for a Tanzanian license."

"The examination requirements for the Novice Class is similar to the US and British Novice license. There is no code requirement for the Novice. Theoretically there maybe a Morse code requirement for the full [privilege] license, in reality all foreign licenses (including code free) are accepted for issuing a full license."

"I think one can say that there is a strong tendency among the few Tanzanian license holders against Morse code requirements and the expatriate hams are divided on the issue. Amateur radio is growing very slowly among Tanzanians. It is hard to motivate Tanzanias to get involved on a continuous base. One of the reasons is that life is very difficult for many and it is not easy for them e.g. to pay for the fees not to mention a radio. Also, until last year it was more or less not possible to make an examination in the country."

"The TARC together with the licencing authority, TCC, started a Novice license last year. Eleven of 15 people passed the examination. But as of today only six still have their license. They got it only because the fees were sponsored by expatriates. The STARS program of IARU Region I sponsored two stations, which helps a lot. One is stationed at a school and the other one at the Scouts. This means only students who are actually studying at this school have access and after leaving the school they cannot continue. Also the Scout's station is easily accessible only for members of the Scouts." ***[Submitted by Michael Seitz, 5H3MS.]***

---

**UGANDA - There are about 10 Amateur Radio operators** in the country and just one license class. There are no examinations, either written or Morse. Peter Casier said Morse code was "needed" and that their ARS was "slowly growing. We are trying to negotiate with the government a way to get local Ugandans licensed through a locally registered examination." *[Submitted by Peter Casier/ UGA]*

---

**UKRAINE – Modern technology may not be good for Amateur Radio** -- There are more than 15,000 licensed amateurs in the Ukraine where they have four different license classes: Class 1, 2 3 and 4. Their examination requirements meet the IARU Region 1 rules and band plan. All classes except Class 4 requires passing a 12 words-per-minute CW test. Igor Zeldin UR5LCV, President of the Ukrainian Amateur Radio League, says there are no plans to reduce or CW requirements! "We think that CW should be historical major type of QSO's exchanges which makes our members more experienced!," Igor said. "We think that CW must be still alive in ham radio."

UR5LCV said that there is no growth in Ukrainian Amateur Radio due to "the big political and economical changes" taking place. "Old youth teaching system over here almost closed," he said. "We have not enough places and facilities to teach young boys and girls amateur radio! We need any type of used VHF and HF equipment for new club stations... Only our league and other public organizations can develop and improve our hobby for the new generation."

Igor thought that "quick developing technology" was making the hobby less desirable for beginners and retired people. He criticized the DX clusters as giving amateurs all over the world the opportunity to reach the DXCC Honor Roll very fast and big advantages in contests.

He also believes "in developing countries modern rig's price are extremely high and many young guys can't collect home made transceivers due the problems with high-tech components. These problems also belongs to the antennas and other types of equipment." Igor feels a more conservative ham radio "...could be much useful for common people and we must stop technological break-down into our community." ***[Submitted by Igor Zeldin UR5LCV, President of the Ukrainian Amateur Radio League]***

---

## The Future of Amateur Radio

***Conclusions from a paper written by Radio Amateurs of Canada (RAC) for the IARU.***

1. We are on the threshold, if not in the midst, of a very significant change in amateur radio. Many aspects of communications technology which have been around for many years are suddenly becoming commercially viable for mass communications, with the result that component and equipment prices are falling, and spectrum demands are skyrocketing. Whether it be digital modes, microwave frequencies, or satellite platforms, the world is changing, and amateur radio will either change with it, or be left behind as a historical anachronism.

2. We also believe that this is a time for optimism, not pessimism. Rarely have there been so many opportunities and challenges for our hobby. It is our opinion that the advantages in the new technology far outweigh the disadvantages. Rather than being seen as a threat, the Internet offers us unparalleled access to information, and a variety of mechanisms for strengthening and extending traditional radio communications.

3. In the midst of this revolution, the role of the IARU as our spokesman on the international scene is rapidly gaining in importance. We really are becoming part of the Global village, with international standards and international frequency allocations playing an ever increasing role in the communications industry, and by extension in the Amateur Service.

4. It must be stressed however, that there will continue to be important aspects of our service which are governed by domestic issues and policies. National Amateur Radio Societies also have an extremely important role to play in publicizing the public service and educational benefits of amateur radio, while protecting our interests within our national boundaries.

5. Finally, our study has shown that there is a disconcerting apathy in the amateur community these days. Few amateurs are aware of the changes revolutionizing our hobby, and even fewer are interested in confronting the threats and challenges. We must find ways of communicating our enthusiasm for what is going on, and engaging our fellow amateurs in the excitement of the new millennium. We must also direct this enthusiasm towards attracting young people to the hobby, to convince them that Amateur Radio is not an anachronism, but that it remains relevant in the light of new developments in wireless and Internet communications. To capture their interest, we must capture their imaginations with new and exciting applications of radio communications.