

## Tech Test Gets a Little More Technical

by *Rtn Dan Romanchik KB6NU (Member ROAR & RC Ann Arbor, MI, USA)*

Ever since the FCC dropped the code requirement and the Novice license exam, the Technician Class license has really been misnamed. Being the first license that most hams obtain, it really should have been called the Novice license. The question pool was arguably at the appropriate level for newcomers to amateur radio, being heavy on rules and operating practices, and perhaps a little light on technical topics. That's about to change. On July 1, 2010, the question pool for the Tech test changes, and this version has noticeably more technical questions than the previous test. You could say that the Tech test is getting, errrr, a little more technical. For example, the new question pool contains more questions about electronics components and their functions. In addition to that, examinees must also

be able to identify the symbols for these components on a schematic diagram. This is a big change from the previous test, which had no diagrams at all.

There are also more detailed questions about transistors and how they work. There are also questions on how to make basic measurements with a multimeter how to troubleshoot basic problems that Technicians are likely to encounter. One question asks, "What two measurements are commonly made using a multimeter"? Answer: voltage and resistance. A follow up question asks, "What is the correct way to connect a voltmeter to a circuit"? Answer: in parallel with the circuit. To make room for these questions, the committee dropped questions on operating practices and rules and regulations. In general, these are not big losses, but two questions that I was sorry to see go are the questions on the



"basis and purpose" of amateur radio. I think these are very important for new amateurs to learn and keep in mind. (If you don't recall them, go to <<http://www.arrl.org/part-97-amateur-radio>> and review them.) By the time you read this--or shortly thereafter--the new version of my No-Nonsense, Technician Class License Study Guide should be available. You can download it free of charge from my website, [www.kb6nu.com](http://www.kb6nu.com) <<http://www.kb6nu.com/>>. Look for the link in the right-hand column. It's currently in the hands of more than two dozen reviewers, who are proofreading it right now. While it may not be in the initial release, I plan to include a section that contains links to websites that cover topics included in the study guide. That way, students can find more information on a topic, if they choose to do so. If you have any favorite websites that discuss making measurements with voltmeters or how to read schematic diagrams, I'd love to hear from you.

*When not updating his No-Nonsense amateur radio license study guides, you'll find him on 40m, 30m, 20m, and if we ever get any sunspots to stick around, 15m and 10m pounding brass. You may even hear him trying to get the hang of using the bug he bought at Dayton this year. You'll find his blog at [www.kb6nu.com](http://www.kb6nu.com) <<http://www.kb6nu.com/>>, and you can e-mail website suggestions to [wggeek@kb6nu.com](mailto:wggeek@kb6nu.com)\*\*\**

## ROAR Saves the Day

In September of 1975 I, with a team of 5 engineer/ scientists, was doing work on a U.S Air Force contract, near Thule Greenland dealing with relationships between Radio propagation and magnetic fields near the geographic North Pole. We had completed our work and were awaiting an airplane transport to pick us up and fly us back to the States. About half hour before the scheduled pick up time, a severe white out occurred with visibility reduced to about 5 or 10 feet. The pilot told us Via radio to hang in there he would return tomorrow same time to get us. We made our way with great difficulty to the Danish Council, only to find the telephones not working. We were disturbed by this because we wanted to inform our families of the weather delay.

Eric Arnholtz was most hospitable and offered his amateur radio rig. By great coincidence it was Sunday morning 8AM (MA time). I put out a call on 14.293. The cherry voice of George Chatfield (K1UIL) Lunenburg MA rode over the static and we were elated.

George handled the necessary traffic with our families concluding with "Hooray for ROAR".

*51 Years Rotarian, 75 Years Ham Radio  
73 Jim Moran W1QUO*



Rtn Jim Moran W1QUO, RC Fitchburg, D7910

## Coax FAQ

Found in the latest ARRL Contest Update, this technical FAQ by Jim K9YC on coax cable says it all: <<http://audiosystemsgroup.com/Coax-Stubs.pdf>>

## Amateur Radio in Emergencies

The role of Amateur Radio Service has been remarkable on the field of Emergency Communications. It is based on technical and operational skills of the licensed Amateur Radio Operators.

During years we have examples where fast flexible and less vulnerable Amateur Radio Service has been able to act as the first responders and continuing Emergency Communications in natural disasters: tsunami in South-East Asia, Hurricane Catherine, China Earthquake 2008, Earthquakes in Italy, Haiti and Chile, floods in Brunei and bushfires of Australia.

E.g. Region 1 (Europe, Africa, Northern Asia and Middle East) of the International Amateur Radio Union (IARU) has been active in Emergency Communications of the Amateur Radio Service. Two new practices are now regular: Global Simulated Emergency Tests (GlobalSETs) twice a year and annual Global Amateur Radio Emergency Communications Conferences (GARECs). These GARECs have taken place since mid 2000's: twice in Tampere Finland, In Huntsville Alabama USA, In Friedrichshafen Germany and in Tokyo Japan. The next conferences are scheduled to be held in Curacao Oct. 11-12th, 2010 and in South Africa 2011. More at [www.garec.net](http://www.garec.net).

The objectives of GlobalSETs and GARECs are as follows:

- To increase common interest in EmComms,
- To prepare Amateur Radio Operators for EmComms,
- To Create practises for EmComms among Amateur Radio Operators on national and international levels,
- GARECs are for changing informations and experiences between all Amateur Radio Operators and groups that are interested in EmComms,
- GARECs are for developing better cooperation with authorities on all levels,

-GARECs are also for giving recommendations and statements.

There are some 2.5 million licensed Amateur Radio Operators in the world. Most of them are in developed countries like USA, Japan and EU area. The third world - especially Africa - is the white area of the Amateur Radio Service.

IARU Region 1 is now in planning to change the situation by ENARSA (EmComm Network by Amateur Radio Service of Africa). Its objective is to build up a basic infrastructure for the Network and African continent. ENARSA is an educational project. At the moment Region 1 is trying to find financial resources and partners for the project. If you have any ideas please contact us.

Tampere Convention (born 1998) has an essential role in EmComms across the borders. It is an ITU contract under UN ratified by 40 countries and signed by 20 and controls ao. customs of telecommunications equipments under crisis situations. It became in force a couple of weeks after the tsunami. The promotion of the Tampere Convention could be part of the ENARSA when connecting national authorities in Africa. Also its implementation is very important. The IARU has also the Memorandum of Understanding with the IFRC (International Federation of Red Crosses and Cresents). As described above during last years we have taken new kind of steps to be better prepared for EmComms.

As a hobby Amateur Radio is most enjoyable. You are learning new skills, you are getting new friends around the world, you have a new way to enjoy your leisure time and you have an opportunity to use your skills to help others in emergencies by participating in EmComms.

SEPPO SISATTO Ph.D, OH1VR (since 1960)

### !! REMINDER !!

Dear fellow members of ROAR,

Rotary International is controlling the activities of all the Fellowships. They need to know the number of members. That number we get from the Roster kept by our Secretary Andy, AE5EA. To verify the membership we collect a formal fee and at the same time registering the duration of the membership. This Roster is used to distribute our magazine The Communicator via Internet. Membership will also give the authorization to access the detailed Directory.

To keep our figures correct and to benefit of our services keep checking and updating your details and your membership!!

73,

*Perti Kause EA7GSU*  
*President*



Rtn Ken Demaray W8SOO, RC Chippewa County Sunrise, D6290

## Remote controlled

radio amateur contest stations

In most Rotary International Conventions there has been a functioning ham radio station. It has not always been easy to set up and in many cases it has been also expensive and not always producing the results anticipated.

This year the installation of radio station appeared to become more complicated because of lack of hands. We decided to try to respond to the challenge by using a remote control kit of which Van, W4ADU had good experience. When writing this the possibility seems not to be feasible because of exceedingly high cost of internet connection and the suitability of the station for remote controlling. Anyhow, this arrangement will in the future make the setting-up of stations easier and may have benefits in the form of lesser negotiations with the authorities and in diminished local qrm.

In recent times the magazines have had articles of SDR's (soft ware designed radios) which would be ideal for remote controlling a station. You can have an idea of it by going to this web site and try a Dutch radio receiver. <http://websdr.ewi.utwente.nl:8901>

The following article of remote controlled contest stations is based on the presentation made by Ville Hiilesmaa, OH2MM/PY2ZEA in Madrid on December 2009 in the AGM of the Union de Radioaficionados Españoles (URE).

Over the years Finland has had many successful contest operators. The high contest scores have depended on operating from rear locations. It has required costly traveling but yield continuous flow of qso's and high number of multipliers. To build one station for only a few contest days a year is expensive and not everyone can spend long time from home. Technical development in recent years is offering the possibility to control an elsewhere located station from the operator's home.

The contest team of Arcala Xtreams, OH8X has amongst it's membership many top operators and the desire to overcome the complexity of contesting has led to the development of a "super station" in Finnish Lapland. The station consists of up-to-date equipment and of seven rotatable towers the highest being 100m and having a five element 80m and three element 160m yagis on top of it. Another contest station has been constructed on Madeira. To get an idea of the possibilities of contesting today you can see and hear OH8NC who is in Los Altos, CA, USA operating the station CU2KH and hear OH2BH, the ambassador of ham radio world (first operating from North Korea, Albania and many others) joining the communication via net and talking with Richard, N6RC in San Jose, CA on radio waves. See <http://radioarcala.com/> and choose "remote control".

In longer term this kind of contesting may become more popular as indicated at <http://www.remoterig.com/> which is advertising equipment for the purpose. The investment in time and man power is considered by the OH8X team members an asset valuable enough to invite young operators to use the station and gain experience of large scale contesting. This solution will perhaps helps us in the future in the every-time problems of Convention station.

During the Convention keep listening to 14293kHz, we are still trying!

## ROAR in Montreal

The International Fellowship of Rotarians of Amateur Radio (ROAR) has the exhibition booth number 2526 in the House of Friendship. Please do pop in to register and to say hello and offer a helping hand, if you can. God willing the Convention radio station VC2R will be there.

The Annual General Meeting will be held during the Convention in the Global Networking Groups meeting room number 525 on Sunday June 20th at 0900 - 1030h. Agenda is a standard as required of AGM. Under Any Other Business will be discussions on the

- participation in Emergency Rescue Service and
- the need of increasing the annual fee.

Your opinion counts, so do participate.



Rtn David Le Jeune WN5V, RC Welsh, LA, D6200

## Amateur Radio and Voluntary Emergency Service in Finland

Finland is a sparsely populated country of 1300 km North to South and approximately 500km on it's widest and with 5.3m people. There is 52000 sqkm of sea surface in which there are 60,000 islands and 34000 sqkm sweet water distributed in 60,000 lakes.

Finland doesn't belong to hurricane infested climates neither does it have any volcanic activity. Major floodings or extreme droughts are not common either. Big forest fires, environmental catastrophes, violent demonstrations and epidemics are not familiar to the Finnish population.

But what the country has plenty of are vast, unpopulated forests, marsh and swamp lands, cold winters with usually plenty of snow. Anybody getting lost on sea or lakes amongst the islands or in the forests will not be easy to find. These circumstances are reflected in the rescue and emergency services in Finland.

The land is divided in 15 emergency areas which will be amalgamated during 2010 into 6 centers and will be controlled by state-managed Emergency Organization. In all the distress situations help will be available by calling one single telephone number 112. It will connect with the nearest center and provides help in rescue-, illness-, social safety and police cases. If necessary the center will connect with other authorities and cares for more extensive alarms like the sea and air rescue services, if needed. Fixed line and mobile telephones connect always with the nearest emergency center and it has the technical capability of roughly locate the mobile phone. The center also gives instructions to the calling person of immediate measures until the professional help is available. In major emergency situations the nature of it determines the leading role to a specific authority which is best capable to handle it.

The call of alarm and the communication between the authorities is using a common telecommunications net which operates on 400 MHz. The same net is used also by some safety authorities and enterprises which are considered necessary in critical situations.

Ham-radio equipments are quite a small part of the Voluntary Rescue Service's (VRS; =my translation and abbr.) communications equipments. Hams are using the 144 and 435 MHz bands. For civilian use there is in Finland the 68 MHz

band with 26 channels. On this band are hunting associations, road service, rally racing and private economic enterprises. This is the most important band of the communications equipments of VRS.

The developing communications technology and increased use of radio spectrum has had a "beneficial" effect on the communications of VRS. The allocation of new frequencies to the national police force produced hundreds of obsolete VHF mobile radios. As a result of two tear negotiations with Ministry of Interior on one side and with PTT on the other side it was agreed that VRS can buy the equipments to a nominal price, that it will have 6 previous police channels and that the technical department of police will check and update the radios. In addition to these radios also 750 hand-portable radios were offered and accepted and are widely in use all over in the country.

The VRS was established 1964 by the initiative of Finnish Red Cross as a consequence of some unsuccessful rescue operations. Still today the most important activity is helping the police in finding disappeared people. New activities are catering, mental aid, accomodations etc.

Finnish Red Cross is coordinating the general voluntary rescue service which includes 50 organizations and associations. These together form about 1200 teams involving apr. 20.000 people. Out of these organizations The Radio Amateur Association is the one specializing only in communications. Other organizations do additionally have also communications capability because it is the minimum requirement to participate. Authorities are relying in the support of Voluntary Service when their man power is insufficient. Voluntary sea rescue has 2000 people and 150 vessels, the air rescue operates with 1500 people and 80 aircraft.

Finnish Amateur Radio League (Suomen Radioamatööriliitto = SRAL) is one of the members of VRS and is included in it's central body as well as in the working group. About 200/300 members of SRAL are involved. The activities are channelled through ham radio clubs. One of the club members is a VRS instructor supported by people higher up in the organization. Each emergency team has an "alarm card" which contains information of the contact person, three alternatives to him, and information of equipment and man

power available. The authorities can reach all VRS rescue teams of one area by calling one single mobile telephone number.

The ham radio club which is in alarm stand-by has one member who forwards the call to the other members of the team. They know best the terrain of the area, often large part of the population and the "radio landscape" i.e. sources of interference and the geography to help selecting the right kind of radios. In 2008 the VRS was alarmed 432 times and members of SRAL were involved 47 times making 487 hours of rescue work. So in spite of "risk free" Finnish environment ham radio was involved almost every week! Because most other member organizations have their communications skills and the number of SRAL members is limited, they are typically employed in main command posts, in handling the equipments and in the "quick training" of the users. Setting up the net, solving the communications problems and service on spot are also well suited duties and responsibilities.

Radio amateurs have had two national field training's, in 2003 and 2008. The "idea generator" in both has been Seppo Sisättö, OH1VR. The objective of training was to set up a radio station in every community in Finland and to connect them with the nationwide radio net which task was achieved in 95%. The requirement was to establish the station without connection to electricity net or information links i.e. completely independent operation. First training was a "paper to paper" exercise and the second was using digi mode RFSM8000. The training followed the organizations principal cellular and area structure. Connections with the national rescue center and the communications in Lapland were using hf-frequencies.

Timo, OH3FN has been involved in the Voluntary Rescue Service since 1978 and the last 10 years as VRS instructor of SRAL. He believes there to be always something to do as the technology is evolving. The inspiration and encouragement to continue this voluntary work, in spite of set-backs is coming by the large number of capable members of SRAL.

*Summary based on article written by Timo Ärliig, OH3FN.*

OH1VR, Seppo Sisättö is chairman of the organizing committee of GAREC 2010 (Global Amateur Radio Emergency Communications Conference; see [www.garec.net](http://www.garec.net)).

## ROAR Montreal

ROAR has been granted a special callsign for the Montreal Convention June 18-24, 2010. We are working towards having a remote controlled station active in our booth in the House of Friendship.

The callsign is

# VC2R

We are looking forward to also have an eyeball QSO with all of you !

## ROAR Directory

Preparations have started to bring out the next ROAR Directory (Roster). Due to practical limitations of snail mail, we are creating the facility for online updation.

All members will be issued with an unique username and password to access the update facility. All those who have access to Internet will be able to update their information on their own. Those who do not have internet access will have to be assisted by their respective Regional Vice-Presidents.

As soon as the facility is ready, we will be emailing you your username and password. Therefore, kindly ensure that your current email id is on ROAR records.

Over a period of time, it will become imperative that we move all our non-ham activities online, and therefore, it is recommended that all members provide us with a valid email address for easier and faster communication to and from ROAR.

## We are looking for

Regional Vice Presidents  
for Africa  
and  
for South & Central America.

Nominations and/or Volunteers welcome.

If you are interested, please contact ROAR President at [pres@ifroar.org](mailto:pres@ifroar.org)

## ROAR Information

The International Fellowship for Rotarians of Amateur Radio (ROAR) was first organized by the late Byron Sharpe W9BE, in 1966.

**PURPOSE:** We provide a forum for the exchange of views between members who share an interest in Amateur Radio, as either licensed Radio Amateurs or as ShortWave Listeners with a view to develop understanding, acquaintance, and fellowship between members worldwide.

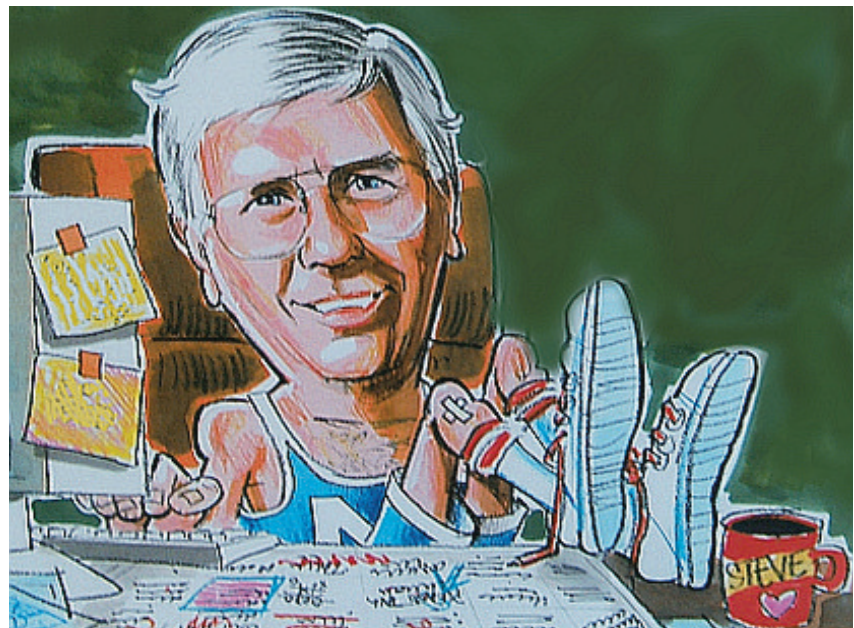
**ELIGIBILITY:** To be a member, you must be a Rotarian, a Rotaractor, a retired Rotarian, or the spouse of a member who is a licensed Amateur Radio operator OR have a genuine interest in Shortwave Radio.

## ROAR Officers 2009-12

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