



# International Amateur Radio Union Region 1 2014 General Conference – Varna-Albena, Bulgaria

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<b>Subject</b>	<b>ARISS - Excellent Possibility to have Youngsters in Amateur Radio</b>		
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## ARISS - Excellent Possibility to have Youngsters in Amateur Radio

The ARISS program was created and is managed by an international consortium of amateur radio organizations and space agencies including National Aeronautics and Space Administration (NASA) in the USA, Rosaviakosmos in Russia, the Canadian Space Agency (CSA), Japan Aeronautics Exploration Space Agency (JAXA) and the European Space Agency (ESA) in Europe.

They organize scheduled contacts via Amateur Radio between astronauts and cosmonauts aboard the ISS and classrooms and educational organizations. With the help of experienced Amateur Radio volunteers from Amateur Radio clubs, and coordination from the ARISS Team, the ISS crew members speak directly with large audiences in a variety of public forums such as school assemblies or at science museums, Scout camporees and jamborees and space camps, where students, teachers, parents and communities learn about space and space technologies and Amateur Radio.

Goals of the ARISS program include:

- inspiring an interest in science, technology, engineering and math (STEM) subjects and in STEM careers among young people;
- providing an educational opportunity for students, teachers and the general public to learn about space exploration, space technologies and satellite communications;
- providing an educational opportunity for students, teachers and the general public to learn about wireless technology and radio science through Amateur Radio; and
- providing an opportunity for Amateur Radio experimentation and evaluation of new technologies

From the ARSPEX WG report we can learn that in the year 2013, thirty school contacts were successfully performed. School students were from 10 countries in IARU Region 1. Each event had very big following in the media and it was nice promotion of what amateur radio can do using its technique and operator skills.

But what happens with the students after the ARISS contact has been performed? Did they join us in amateur radio? Is it possible? From a Croatian experience, we can say YES.

When a school, as a joint venture with amateur radio (single or radio club), claims its wish to participate in an ARISS project, they have to wait about 18 to 24 months on the ARISS contact waiting list. In the Croatian case, the Hrvatski DX Club (9A1A)

claimed together with Tehnička škola Ruđera Boškovića their wish to participate in ARISS project at the beginning of the year 2012. The ARISS contact was performed on June 26<sup>th</sup> 2013.

Having information about the waiting time, 9A1A offered to the School the possibility to have a Novice licence class course for students who will be possible participants in the ARISS school contact and to install amateur radio station in school. Immediately permission was issued. The call 9A1RBZ was issued by the Croatian Telecom Agency (HAKOM).

Saying "possible participant" we got 100 students on course. Novice exam was performed in December 2012. Sixty (60) students passed the exam and immediately became active at 9A1RBZ from January 2013. They were in position to get amateur radio operating skill, before the VHF contact with the astronaut from the ISS.

The best 28 students were selected, and 23 of them successfully participated in the contact with astronaut Luca Parmitano, KF5KPD. As we had the ISS orbit over the Adriatic Sea, which means the maximum elevation angle was about 45 degrees, we had excellent results. Thanks to operating skills learnt by the students, there was no fear performing the contact with the astronaut and we did it!

Being very sure of the technical and operating quality, we together with the School managed to watch the event at the School live with many VIP's, such as:

- Minister of Science, Education and Sports with his 2 advisers
- Croatian Post and Electronic Telecommunication Agency (HAKOM) CEO
- Croatian Telecom CEO
- Deputy Director of Zagreb City Education, culture and sports Department
- Members of Croatian amateur radio society(HRS) Board
- 20 school professors
- More than 20 journalists

The event was shown for a few minutes in the Headline News of the national wide TV broadcasters 'Hrvatska televizija' and Nova TV. The VIPs present were very impressed and the positive echo within the Croatian population was really good!

### **What are the results?**

1. 9A1A got permission to send 10 students to a summer school on the Adriatic coastline. The students participated free of charge. The City of Zagreb paid almost all the costs. A small amount was paid from donations received. A HF station was set-up and 9A1RBZ was active. Led by mentor, 9A9A, students also learned more about amateur radio.
2. When the new school year started, 20 of them asked to learn Morse code. Twelve of them successfully completed the course and they will become active on CW very soon.
3. The 9A1RBZ team participated in some Croatian local contests and they participated in the UBA SSB Contest 2014 and the EA RTTY Contest 2014.
4. Five of them will be ready to pass. The "A" (CEPT T/R 61/02 compatible) class exam. The exam will be in September 2014.

5. 9A1A received an offer from the School to have Novice class courses in the school teaching programme (school curriculum) as a non-obligatory school activity. We accepted it. Again, we have chosen second grade students, aged 16. The Novice course had 20 participants and new generation of 12 school students passed the exam in December 2013. All of them are active at the school 9A1RBZ station. The Novice course will continue in future years. Second grade students are chosen because they will be additional two year students in this school, what give us two year of their amateur radio activity, not only operating at 9A1RBZ.
6. The Croatian team for the YOTA 2014 event consists of 9A9A as mentor and four (two girls and two boys) from 9A1RBZ.
7. The City of Zagreb plus donators will sponsor the Summer Camp 2014 at the Adriatic coast again. Probably with more 9A1RBZ students.
8. In forthcoming contests, at least 5 of them will become 9A1A team members. At present, the youngest team member is aged 44, it will be reduced to 17, with a very good chance to maintain this age for a long time!
9. The 9A1A experience shows that youngsters are not only interesting in internet and mobile phones!

## **RECCOMENDATATIONS**

1. **ARSPEX WG through the ARRIS team, should recommend to local amateur radio operators or clubs, who are preparing to perform ARISS contacts, to offer to a school to organize the Novice level of the amateur radio course.**
2. **As waiting time to perform ARISS contact is from 18 to 24 months, a preferable solution should be to have a licenced amateur radio station in the school or to enable students – young radio amateurs who passed the exam, to practice at the amateur radio station.**
3. **Youngsters who performed ARISS contacts should have the possibility to continue their activities in amateur radio.**