



JAMBOREE on the AIR

Getting started with JOTA

What is Jamboree on the Air?

The **Jamboree on the Air**, or **JOTA**, is an annual Scouting event that uses amateur radio to link Scouts around the world, around Canada, and in your own community. Held on the third full weekend of October each year, this worldwide jamboree requires no travel, other than to a nearby amateur radio shack, Scout meeting place, camp or community center.

JOTA started *right here in Canada* in 1958. In 1997, communicating through the internet was added, and this was called **Jamboree on the Internet** or **JOTI** for short. Both annual events are now international in scope, and sanctioned and sponsored by the *World Organization of the Scouting Movement*.

Each year, more than 500,000 Scouting and Guiding youth from around the world take part.

In Canada, anyone can speak on an amateur radio station under the supervision of a licensed operator. In some countries, only licensed Radio Amateurs are permitted to speak on the air, while in other countries, Scouts and Guides are permitted to speak on the radio just as we can here in Canada.

How do I get started?

To participate in JOTA you really only need two things: radio equipment, and at least one licensed Amateur Radio operator who is able to operate the radio station.

In some Scout groups you may have both of these already. Lots of Scouters are also Amateur Radio operators, and they would be able to help you get “on the air” for the JOTA weekend.

If you don't have Amateur Radio operators in your Scout group, you probably have some in your community. Many belong to Amateur Radio clubs throughout Canada, and many of those clubs are part of Radio Amateurs of Canada, the national organization for all Amateur Radio enthusiasts. Information on contacting them is found on the next page.



It starts with Scouts.
Tout commence avec les Scouts.

JOTA - Getting Started Guide

On these next few pages are some helpful hints on how to get “on the air” for JOTA. If your question is not fully answered within these pages, you can also contact the Scouts Canada **National JOTA/JOTI Co-ordinator** at JOTA.Coordinator@scouts.ca for further assistance and information.

Finding a Radio Amateur

If you do not know of a Radio Amateur who can help you, try to find a local Amateur Radio Club. Radio Amateurs are very enthusiastic about their hobby, and often willing to help, especially since it gives them a chance to introduce their hobby to a new, younger generation.

The **Radio Amateurs of Canada** maintains lists of Amateur Radio Clubs across the country. You can contact them at:

Radio Amateurs of Canada
720 Belfast Road, Suite 217
Ottawa, ON K1G 0Z5

phone (613) 244-4367 (10am – 4pm ET, Mon-Fri)

e-mail rachq@rac.ca or on the web at www.rac.ca

Once you have made contact with a local Radio Amateur or Club, there are a couple of options. If the local operator or club has a radio station set up, your Scouts could visit the station. Alternatively, the radio operator(s) may be willing to come to your meeting place and set up a mobile or portable radio station. Lots of Radio Amateurs like to practice doing this as it helps them assess their readiness to help out in an emergency – something Radio Amateurs like to be prepared to do.

If you have a Radio Amateur willing to come to you, consider organizing your event in an outdoor setting – perhaps at a Scouts Canada camp or other outdoor location. Many groups combine JOTA with their fall camp!

JOTA BASICS - TALK ON THE RADIO

JOTA takes place on the third full weekend of October every year. It officially starts at **0000** hours local time on **Saturday** and officially ends at **2359** hours on **Sunday**. However, the number of participants varies throughout the weekend. Keep in mind the times in the part of the world you are planning to contact – while there are “night owls” everywhere, most Scouting aged youth tend to be in bed at night, not on the radio!

The official **World Scout Frequencies** are listed in the table on the right. Don't worry if you don't understand them – your Radio Amateur friends will! These frequencies are often used all around the world on JOTA weekend and help ensure Scouts will be able to contact each other.

WORLD SCOUT FREQUENCIES

Band	SSB (Phone)	CW (Morse)
80m	3.740 & 3.940 MHz	3.590 MHz
40m	7.090 & 7.190 MHz	7.030 MHz
20m	14.290 MHz	14.060 MHz
17m	18.140 MHz	18.080 MHz
15m	21.360 MHz	21.140 MHz
12m	24.960 MHz	24.910 MHz
10m	28.390 MHz	28.180 MHz
6m	50.160 MHz	50.160 MHz

or via IRLP and/or Echolink using VHF/UHF repeaters

Once on the air, Radio Amateurs can enter the event by calling “**CQ Jamboree**” or by answering other stations using this call. Remember that all Radio Amateurs must strictly observe their radio license regulations at all time.

It's amazing how quickly most people get comfortable talking on the radio... but everybody can get shy sometimes. Don't worry about this, and remind people to talk naturally and calmly and they'll be conversing in no time at all!

The key things are to:

- ✓ *clearly identify yourself*
- ✓ *take your time*
- ✓ *speak slowly and clearly*
- ✓ *ask for a repeat if you aren't sure you understood*
- ✓ *talk naturally, as if you were talking to your buddy on the phone rather than around the world!*



REPEATERS AND LINKED RADIO SYSTEMS

Traditional radio communication was point-to-point, that is from one radio directly to another. This works well for low frequencies (long wavelengths) usually designated HF (High Frequency, in the 3 to 30 MHz range). Because radio waves in this band can be reflected back to Earth by the ionosphere layer in the atmosphere, called "skip" or skywave propagation, these frequencies can be used for long distance communication, at intercontinental distances. However, because the wavelengths are long, very large antennas are needed to effectively communicate at these frequencies, often measuring 20 metres long or more.

Sometimes it is more convenient to use VHF (Very High Frequency, from 30 to 300 Mhz) frequencies because the equipment is simpler and the antennas required are much shorter, perhaps only a meter. However, VHF frequencies do not usually bounce off the ionosphere, so the distance you can cover is limited to slightly more than line of sight, a direct connection between the two radios of maybe only 150 kilometres at best.

Since Radio Amateurs want to communicate farther than that using VHF, many operators and clubs have established **repeaters** in the VHF bands. These are special radios that can receive a radio signal on one frequency (called the *input frequency*), and repeat or rebroadcast it on another slightly different frequency (called the *output frequency*). Now, a radio just at the edge of the range of the repeater (say 150 km away) can talk to the repeater, and the rebroadcast signal can be picked up by a radio 150 km further away, the other side of the repeater. Now, stations 300 km apart can talk to each other!



This can be taken one step further, by *linking* repeaters together. If our repeater's output frequency was the input frequency of another repeater, 120 km away, then the rebroadcast signal on its output could be heard by a radio 420 km away from our original radio.

NEW LINKING TECHNOLOGIES - Using the Internet

There are many new technologies used by Amateur Radio operators today. These are ways to incorporate the Internet and computer communications, includes linking technologies like **Echolink** and **IRLP**.



Both IRLP and Echolink are ways to connect radio systems together using the Internet in between. This is similar to the way many VoIP or Internet phone systems work today. For instance, your local radio many connect you to a radio repeater in a nearby city. Normally that would only let you talk to people within radio signal distance of that repeater, but if that repeater has an IRLP or Echolink connection, it can be connected using the Internet to another repeater that may be half way round the world. Now, when you transmit, your voice is also transmitted from that far-away repeater in another country, and when they answer, their answer is sent by the local repeater to your radio!

IRLP is an acronym for the **Internet Radio Linking Project** (for more information visit www.irlp.net) and there are IRLP equipped repeaters all around the world.

An extra feature called a **reflector** adds yet another dimension. Many IRLP nodes can connect to the reflector, and then *everything transmitted is heard by **all** the repeaters that have joined in!* Think of this as a Radio/Internet Conference Call and this is a great way to have JOTA chats. There is a dedicated Radio Scouting reflector on IRLP node **9091** which can be used to contact others participating in JOTA.

Your friendly Radio Amateur can help you using these technologies, or can find somebody else who will!



MAKE IT A FUN DAY

Many successful JOTA events are combined with other events to make a well-rounded, fun day for Beaver Scouts all the way up to Rover Scouts.

Jamboree on the Internet (JOTI) also takes place on the same day. If you have access to the Internet where you are organizing your JOTA event, you can add this Internet-chat-based activity as well.

Your JOTA event can include many other themes and activities, including:

- **Morse code practice** (your local Amateur Radio club can help with this)
- **Communication oriented games** (contact the National JOTA Co-ordinator for some suggestions)
- **Educational activities about communications**
- **Technical or engineering activities like building simple telegraph circuits**
- **Emergency preparedness** (contact the Canadian Red Cross for some ideas and program help)

Also, for many groups (depending on your local schedule), JOTA weekend often happens to also be Apple Day, and it is great if you can combine the two events together so your Scouts can come out and participate in two great events with one trip.

Finally, consider organizing your event in a public location in your community, like a community recreation centre or shopping mall. This can turn into a great recruiting tool for Scouting as curious passers-by stop to see what is going on.

AFTER THE EVENT...

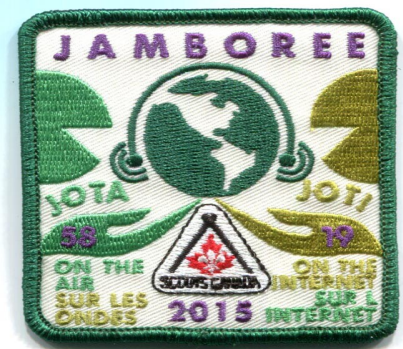
All Scouting countries that participate in JOTA share information and reports after the weekend. We need to be able to collect this data from those who participate in JOTA so we can summarize it and make our report to the World Organization of the Scout Movement.

Please register your JOTA activities on the Scouts Canada JOTA microsite:

www.jota-joti.ca

and this will allow us to collect your participation data.

You can also register on the microsite to order the annual Scouts Canada National JOTA Crest.



Scouts Canada JOTA/JOTI Crest

IF YOU NEED HELP

If you need help, we will do our best to get it for you.

Most Councils in Scouts Canada have a **Council JOTA Representative** who can assist you in connecting with other groups who are participating in JOTA.

Register on the microsite at www.jota-joti.ca to be automatically connected with a JOTA Representative.

Or send an e-mail to the **National JOTA/JOTI Co-ordinator** at JOTA.Coordinator@scouts.ca and we will get you the help you need!

Many Radio Amateurs and Amateur Radio Clubs across Canada will also be willing to help you get “on the air” for JOTA.

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