

VOIP MODES FOR ARISS SCHOOL CONTACTS

When conditions do not allow a direct radio contact between the International Space Station and the school or other event location, ARISS provides a so-called “telebridge”.

ARISS counts several dedicated ground stations around the world. When needed, the radio contact is done by one of these ground stations and the audio signals are relayed by telephone line to the location where the event takes place.

With the audio from the ISS and the event location being available on this telephone line (bridge), ham radio operators from the EchoLink and IRLP ARISS audio feed teams take the audio from the bridge and feed it into the IRLP and EchoLink ham radio systems, to allow ham radio operators around the world to listen to these contacts live.

ECHOLINK

The EchoLink system uses VoIP through the Internet to transmit audio between two or more locations. The in and out of audio at all EchoLink locations (nodes), can be done by connecting ham radio transceivers or repeaters to Windows based computers. Alternatively, microphones and speakers can be used connected to computers to communicate through this system without ham radio transceivers or repeaters. In any case, before any node can participate in such transmissions, a verification is made during the installation of the EchoLink program to ensure that only licensed ham radio operators can use this system.

The EchoLink system is designed for easy installation on computers with the Windows operating systems. It only runs on Windows computers.

The installation program for EchoLink is available free of charge for downloads from www.echolink.org/ with good help file information on the installation and use of this program.

The ARISS EchoLink audio feed team feeds the audio from bridge contacts into the following two servers, called “Conferences” in EchoLink speak:

AMSAT (node 101 377)

JK1ZRW (node 277 208)

These two servers allow for many EchoLink nodes to connect to them at the same time. Please give JK1ZRW your preference during such audio feeds to keep the load light on the AMSAT server.

During audio feeds, text messaging can be used during ARISS audio feeds, while all nodes connected to these two servers are being muted (to prevent inadvertent interfering transmissions). After the completion of ARISS contacts, all connected nodes will be un-muted to allow for comments and information exchanges.

IRLP

The IRLP system, for licensed hams only just as the EchoLink system, also uses VoIP through the Internet for audio transmissions between different nodes.

The IRLP system can only be used by having ham radio transceivers or repeaters connected to each node. The IRLP system runs only on computers using the Linux operating system.

To allow for many nodes to participate in round table conversations, servers have been set up, called reflectors in IRLP speak. Each reflector can handle many simultaneous connections.

To connect a node to a reflector, most nodes are set up so that one only has to key in the number of a reflector, e.g. 9010.

The reflector 9010 has been created to facilitate the distribution of ARISS bridge contact audio. During such events, simply dial in 9010 using your microphone touch pad while transmitting on the frequency of the IRLP node you are using to connect to the Discovery Reflector 9010. To disconnect the node you are using from the reflector, dial 73 on your node's frequency and you should hear a message that you are being disconnected.

Good information on the use of the IRLP system can be found on www.irlp.net

SUMMARY

We hope that you will find the time to listen in on some of the ARISS telebridge contacts. If you need more information on how to listen and / or when such contacts take place, feel free to e-mail Dieter kx4y@amsat.org with ARISS audio feeds in the message title.

As soon as dates and times for upcoming contacts are known, that information is being posted on the calendar of events on the AMSAT web site www.amsat.org

If you want to be notified by e-mail of upcoming ARISS bridge contacts with audio feeds into EchoLink and IRLP, please e-mail a request to Dieter, KX4Y and he will put you on his distribution list of listeners.