

**EchoLink**  
Joe in California talks to Al and Ken in Connecticut via Don's 2 Meter Repeater

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### What is EchoLink?

The simple answer is EchoLink software uses VoIP technology to link ham radio stations together around the world using the Internet as the "backbone" connection with the end user connecting using a direct connection through a computer, a cell phone or a radio transceiver connected to the Internet through a host gateway.

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EchoLink software allows licensed Amateur Radio stations to communicate with one another over the Internet. The program allows worldwide connections to be made between stations, or from computer to station, greatly enhancing Amateur Radio's communications capabilities. At this time there are more than 200,000 validated users worldwide, in 151 of the world's 193 nations with about 5,200 of these stations on-line at any given time.

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If you are in range of an FM repeater or simplex station equipped with EchoLink, you can use DTMF commands from your radio to access the EchoLink network. If you are a licensed amateur with an internet-connected PC , you can access EchoLink stations directly from your PC.

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EchoLink is a system designed to provide VoIP gateways for repeaters and simplex stations. EchoLink, however is NOT "Skype" or some form of Internet "chat room". With EchoLink you can talk to stations that are mobile or portable going through their locally linked repeater.

Basically EchoLink offers two different modes, or "clients": Single User and Sysop. Single User mode does not require the use of a transceiver while Sysop uses a transceiver with the software to be either a repeater or link (sometimes incorrectly referred to as a "Simplex Repeater").

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In Single User mode the ham is directly connected to the Internet using a computer.

In Sysop mode there are two possibilities:

Simplex linking:

The ham uses a VHF/UHF handheld to tune to a simplex frequency preset on the transceiver connected to a PC on the EchoLink network which provides remote access to the Internet. The base station computer then processes the received signal digitally before sending it over the Internet.

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Repeater linking:

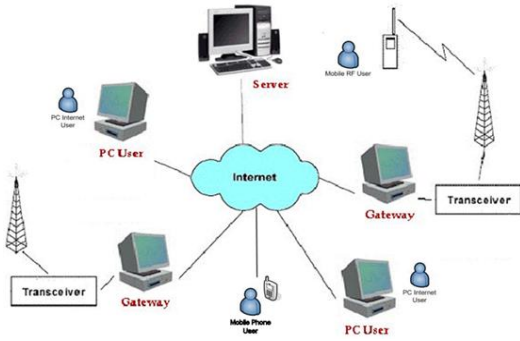
The transceiver in the scenario above is instead tuned to the frequency pair of a local repeater.

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Courtesy K1RA

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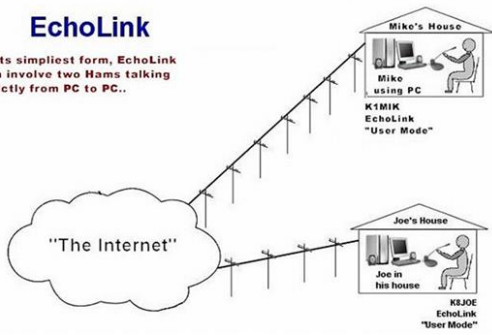
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### EchoLink

In its simplest form, EchoLink can involve two Hams talking strictly from PC to PC..



Courtesy K1RA

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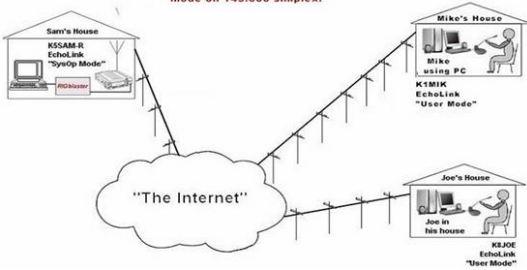
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### EchoLink

And, now we have Sam joining the conversation with his 2 meter transceiver in "Sys Op" mode on 145.600 simplex.



Courtesy K1RA

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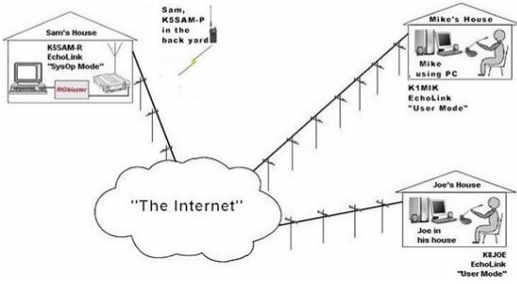
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**EchoLink**

Sam now takes his HT - also tuned to 145.000 and goes into his back yard to operate.



Courtesy K1RA

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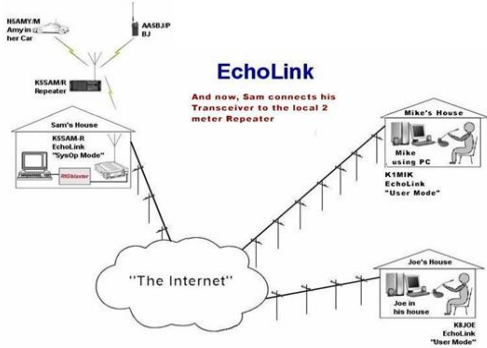
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Courtesy K1RA

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**Hardware Required**

- Using without a transceiver  
Any personal computer, including smart phones capable of running the software that is available for that OS
- Using with a transceiver  
A personal computer  
A transceiver  
An interface between the transceiver and computer

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## Software

- For Windows PC's  
EchoLink
- For Apple PC's  
EchoMac
- For Linux PC's  
Svxlink, thebridge
- For iPhone's  
EchoLink
- For Android phones  
EchoLink

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## How do I get started?

First, you will need to download EchoLink software from the Internet or the following web site:

<http://www.echolink.org>

When you install the software you will be asked for your callsign and email address. Be sure you have a good Internet connection then run the application to register your software and your callsign. The final step is to provide proof of license so your callsign can be added to the system. To do this go to the link above and click on the pages "Validation" link.

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You will be required to submit, digitally, a photocopy (or digital photograph) of your Amateur license, showing the callsign under which you are requesting validation. The copy must show clearly the license expiration date and the license must not be expired. The license copy may be sent to the EchoLink validation team by scanning and uploading it, or by sending it as a fax. Other options may also be available, see the EchoLink Validation page for complete instructions.

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Is there a separate "sysop" version of the software?

There is only one version of EchoLink, which can be operated either in "user mode" or "sysop mode". Switching to sysop mode enables all of the features needed for connecting a transceiver to EchoLink using your computers sound card and interface board or external interface.

How does EchoLink handle security?

Each new user must be validated before being granted access. After having been validated, each EchoLink user must provide a password, along with their callsign, to log in. Each time a connection is made for a QSO the EchoLink servers verify both the sender and receiver before communication can begin. EchoLink can also be configured to accept connections only from certain types of stations: repeaters, links, users, or all three. You can also setup a list of any number of "banned" callsigns or block or accept connections according to their international callsign prefix, in order to comply with your country's rules regarding reciprocal control-operator privileges or third-party traffic restrictions.

If I install EchoLink will I start getting viruses and worms from the Internet?

In short, no. Unlike other software such as email, file sharing and Web browsers, EchoLink doesn't have any way to accept files or "attachments" which might harm your computer.

### CQ iDX Award

Working by Internet, you can get the new [CQ iDX award](#). Introduced by CQ Magazine in June 2005, you need to confirm between 25 and 100 different DX "entities" through the use of Internet-linked repeater systems or remote bases. Echolink users are welcome on the condition that at least one person in each contact is transmitting via the radio in the amateur bands (thus through -L or -R contact only and not purely Echolink QSOs between users connected to their respective computer). SWLs may qualify. Confirmation can be done by traditional QSL cards, eQLS, and emails.

Information from the following sources:

<http://www.echolink.org/>

With special thanks to:

VR2XKP: <http://www.vr2xkp.org/2013/03/13/life-rpi-svxlink-echolink-node-rpi/>

K1RA: <http://www.k1ra.us/>