

# What is Echolink?

The best from various sources  
Primarily from [echlink.org](http://echlink.org) and  
[wikipedia.org/wiki/echolink](http://wikipedia.org/wiki/echolink)

## General Information

EchoLink<sup>®</sup> software allows licensed Amateur Radio stations to communicate with one another over the Internet, using streaming-audio technology. The program allows worldwide connections to be made between stations using RF or from computer to station, or computer to computer greatly enhancing Amateur Radio's communications capabilities. There are more than 200,000 validated users worldwide — in 162 of the world's 193 nations — with about 5,000 online at any given time.

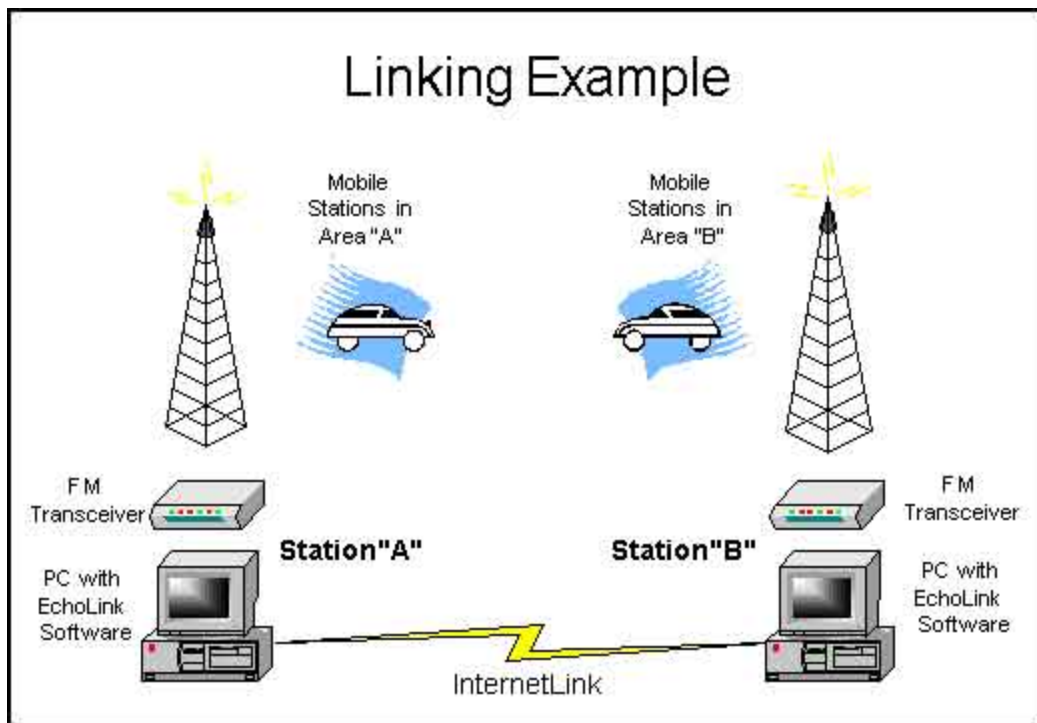
EchoLink is a free computer-based Amateur Radio system that allows [radio amateurs](#) to communicate with other amateur radio operators using [Voice over IP](#) (VoIP) technology on the [Internet](#) for at least part of the path between them. It was designed by Jonathan Taylor, a radio amateur with [callsign](#) K1RFD.

The system allows reliable worldwide connections to be made between radio amateurs, greatly enhancing Amateur Radio's communications capabilities. In essence it is the same as other VoIP applications (such as [Skype](#)), but with the unique addition of the ability to link to an [amateur radio station's transceiver](#). Thus any low-power handheld amateur radio transceiver which can contact a local Echolink node (A node is an active Echolink station with a transceiver attached) can then use the Internet connection of that station to send their transmission via VOIP to any other active Echolink node, worldwide. No special hardware or software is required to relay a transmission via an Echolink node.

## What can I do with EchoLink?

EchoLink allows licensed Amateur Radio stations to connect to one another over the Internet. You can use EchoLink to connect your station (or your computer) over the Internet to other amateurs using the same software, and carry on a voice QSO. This greatly enhances the range and utility of mobile and portable VHF/UHF-FM stations, and also allows computer-equipped hams to access distant repeaters directly.

You can access EchoLink either with a radio or a computer. 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.



### How do I get started using it?

Before using the system it is necessary for a prospective user's callsign to be validated. The EchoLink system requires that each new user provide positive proof of license and identity before his or her callsign is added to the list of validated users. There is no cost for this service, and it ensures that this system is used only by licensed amateur radio operators.

First, [download](http://www.echolink.org) the software from [www.echolink.org](http://www.echolink.org) . You will be asked to provide your callsign and e-mail address. Then, install the software on your PC, be sure you have a good Internet connection (56k modem or better), and start it up to register your copy of the software. The final step is to provide proof of license so your callsign can be added to the system; see [Validation](#) for details. Then, you're ready to go.

Radio amateurs using the EchoLink software can operate it in one of two modes:

- Single User Mode. If they have an Internet-connected computer, they can use the computer's microphone and speakers to connect to (or through - see below) other EchoLink-enabled computers over the Internet and talk to the amateur at the other end.
- Sysop Mode. This entails connecting their own [VHF](#) or [UHF](#) transceiver to their Internet-connected PC with a specially-designed hardware interface. Doing this enables another radio amateur with their own transceiver, who is within radio range of this station, to communicate with (or through) any other EchoLink-equipped station anywhere in the world. This is the unique feature of EchoLink.

Radio amateurs without the EchoLink software or a computer connected to the Internet can take advantage of the EchoLink network if they are within radio range of a sysop mode EchoLink station. It is also possible to link a sysop mode EchoLink station to a local [repeater](#), further enhancing the communication possibilities.

### **Is EchoLink a digital mode?**

No. EchoLink is an extension of conventional voice modes, particularly FM. EchoLink communicates over the Internet digitally, but does not transmit any digital signals over the air.

### **Is EchoLink an Internet "chat room"?**

No. EchoLink is a system designed to provide VoIP gateways for repeaters and simplex stations. Standard FCC rules apply such as "ID"ing every 10 minutes and bad language. Remember, in conference mode, you are retransmitting through the internet to repeaters. If you are interested in talking (by voice) with other Internet users from your computer, or you would like to participate in or set up your own Internet chat room, please use one of the many excellent software packages designed for this purpose, such as [Skype](#).

### **Courtesy to remember**

The software used by Echolink can have a certain amount of delay before un-keying linked transmitters used to talk to the repeaters. When talking on a repeater connected to Echolink, or when using a computer to talk to someone on a repeater that is connected to Echolink, remember to always pause a few seconds between transmissions. Not only will this allow someone to break in, but also more importantly, it will allow link transmitters to un-key, and prevent the time-out timers in either the link transmitters or the repeaters themselves from shutting down.

When multiple repeaters are on the Echolink server(s), one has no way of knowing if an unused repeater or its link transmitter may have timed out because of a constant key up of its linked radio.

A note about the "chirp" heard on the repeaters. This is an Echolink "courtesy tone" that are generate out of the repeaters when an Echolink station has completed talking. If you hear this chirp after someone is talking, it indicates that the person was coming in via the Echolink system and not talking directly on the repeater. Not only does it allow one to determine whether the signal is local or Echolink, but it also lets one know when the Echolink "link radio" has un-keyed and that you may now respond.

Remember, when talking to someone via Echolink; always wait for the chirp before responding. If you key up too quickly, you will be doubling with the link transmitter and the first part of your transmission will not make it down through Echolink to the person you are talking to.

### **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 computer's sound card and one of the popular interface boards offered by WB2REM, W5TXR, or West Mountain Radio. For more information, see [Interfaces](#).

## **How does EchoLink handle security?**

After having been validated, each EchoLink user must provide a password, along with his or her callsign, to log in. Each time a connection is made for a QSO, the EchoLink servers verify both the sender and the receiver before communication can begin.

In addition, if you wish, you can configure EchoLink to accept connections only from certain types of stations: repeaters, links, users, or all three. You can also set up a list of any number of "banned" callsigns, which will not be allowed access. In addition, you can 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.

In Sysop mode, by default, EchoLink announces each station by callsign when the station connects. The EchoLink software automatically generates detailed logs and (optionally) digital recordings of all activity on the link.

## **If I install EchoLink on my PC, will I start getting Internet "viruses" and "worms" ?**

No. Unlike software such as e-mail programs, file-sharing programs, and Web browsers, EchoLink does not have any way to accept files or "attachments" that might harm your computer. There are no known cases of EchoLink accepting or spreading a computer virus.

Any PC connected to the Internet should always be protected by some sort of Internet security hardware or software. It is important to keep this protection in place even after installing EchoLink. Some users have run into trouble with viruses and worms after installing EchoLink, not because of any problem with the software, but because they had removed or disabled this protection while troubleshooting connection problems. Keep this in mind, particularly if your computer remains connected to the Internet for longer periods of time because you are running EchoLink.

## **What is the difference between EchoLink and IRLP?**

EchoLink and IRLP are two separate systems that achieve a common purpose: Interconnecting Amateur stations by voice over the Internet.

The [IRLP](#) system consists of RF gateways (called *nodes*) and *reflectors*. Each node is either a simplex link or a link to a repeater (like an EchoLink Sysop node); there is no direct access from a PC. Each node supports only one connection at a time, but numerous reflectors are available (like EchoLink conference servers) to support roundtables and nets.

IRLP node owners purchase and install a custom interface board that comes with a special edition of the Linux software package on which the IRLP software runs. Each node has a 4-digit number, and one node can be linked to another using DTMF codes, similar to EchoLink. IRLP nodes can be customized by writing Linux shell scripts.

## **Is EchoLink available for any platform other than Windows?**

EchoLink is designed specifically to run under Microsoft Windows. Currently, there are no plans to offer versions of EchoLink for other platforms (except as noted below).

However, if you are running a Macintosh with OS X, you can use the program [EchoMac](#) by N9YTY, which is compatible with EchoLink. (Support for EchoMac is not available through the EchoLink Web site.)

Many users have also had success running EchoLink under Linux using the [Wine compatibility layer](#). For example, EchoLink is known to work with Fedora Core 5 and above, with a few limitations. However, Linux is not an officially supported platform for EchoLink.

## **What about remote control?**

For enhanced remote control, EchoLink includes a built-in, password-protected Web server which can be set up to accept commands from any Internet-connected computer. Basic functions allow you to remotely enable or disable the link, disconnect stations, and see who is currently using it. The software also supports a basic and extended set of DTMF commands for control over a radio link. For example, you can key in either the node number or the callsign of the station you wish to connect to. EchoLink also supports full DTMF remote control over a dial-up telephone line, if a dedicated line is available.

## **Is EchoLink available for a Smartphone or PDA, such as an iPhone or a Windows Pocket PC?**

Many handheld computers (PDAs) and smart phones now have wireless networking and audio capability. An edition of EchoLink for the Apple [iPhone](#) and [iPod touch](#) is now available, free of charge, at the [App Store](#). You must already be a validated EchoLink user before you can use this edition of the program; if you are not already validated, please download and install the Windows version on a PC first, then follow the validation procedure as outlined on this site.

An edition of EchoLink for Android is also available from the Android Market. However, there are no plans to offer EchoLink for other mobile platforms. Please note that Windows PC applications such as EchoLink cannot be installed on a Windows Mobile device.

## **Can I use EchoLink to set up a private link system?**

EchoLink is offered free of charge to the worldwide Amateur Radio community for the purpose of setting up simplex and repeater links that can be accessed by other EchoLink users. Although there are security features that allow you to limit access to your node, the software (and the system in general) is not intended to be used to create closed or private systems.

## **Other Information**

The software is written to run on 32-bit and 64-bit versions of Microsoft Windows. Another edition of the software runs on Apple mobile devices (iPhone, iPod touch, and iPad), and is available from the Apple App Store. Finally, an Android version is available on the Android Market.

Editions of EchoLink are also available for two of the major [Smartphone](#) platforms. In February 2010, an edition of EchoLink was released for the Apple [iPhone](#), [iPad](#), and [iPod touch](#) on the App Store. In August 2010, an edition of EchoLink was released for the [Android](#) platform, and is now available on the Android Market. Both the iOS and Android editions were created by Jonathan Taylor (K1RFD), the author of the original Windows edition.

[Open source](#) software packages that are largely compatible with EchoLink are available for Macintosh (EchoMac) and Linux (echoLinux or SvxLink/Qtel), but at the present time (February 2007) they have limited features compared to the Windows version, at least when comparing the desktop applications.

## **References**

- The EchoLink help file, from v 1.9.892 of the software
- "[Echolink reference on the Wine Database](#)". 31 January 2008.  
<http://appdb.winehq.org/objectManager.php?sClass=application&id=994>.

## **External links**

- [EchoLink Home](#)
- [CQINet \(EchoLinux\) Home](#)
- [SvxLink Home](#)
- [EchoIRLP](#)
- [W6DTW commentary and critique on EchoLink](#)
- [Rede Portuguesa Echolink \(Portuguese Echolink Network\)](#)
- [Red Echolink en España \(Spanish Echolink Network\)](#)