

FRRL W9CEQ IRLP and Echolink Repeater Instructions

Our Node has been in service since January 14, 2002 at 11am

Version: 2

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Description of IRLP:

IRLP (Internet Repeater Linking Project) allows world-wide voice communication between local VHF/UHF repeaters and simplex radios if they are connected via the Internet. The FRRL UHF Repeater is one of almost 3000 repeaters on the system around the world. Our repeater was the 300th node. These local repeaters or base stations are called nodes.

Communication paths:

The IRLP system supports one-to-one connections between two individual nodes or one-to-many communications through nodes called reflectors. There is a virtually real time web site that lists the status of the nodes, <http://www.irlp.net/15-status/frame.html>. This list shows:

- IDLE nodes that are available for connection
- nodes that are DOWN (out of service completely) or OFFLINE (inaccessible by a remote user)
- call sign of a single node connection in progress
- indication if the node is already connected to a reflector (REF#, or ECHO for audio level testing).

Any node user can use DTMF commands to connect their local node to a distant single node or reflector node. DTMF commands are also used to disconnect the connection prior to an inactivity time out timer. Although there are programmable activity timers (typically 4 minutes) which can disconnect node connections, it is desirable to have FRRL Repeater member control operators present to ensure that all communications meet the standards and procedures of the IRLP network and the FCC. The FRRL Repeater Committee has decided to allow any licenced ham operator use the UHF Echo-IRLP repeater. Consistent Echolink or IRLP users are to be encouraged by all FRRL members to join the FRRL Repeater group and the Fox River Radio League.

Description of Echolink:

Echolink is similar to IRLP in that it provides Internet connections from our repeater to other repeater or simplex nodes, but also adds the capability for our repeater to connect to or from computer users. These computer users must follow normal FCC identification rules as they are remote controlling our repeater transmitter.

Operating Procedure:

Initiating a node connection:

1. The User should check the IRLP node list at www.irlp.net or the Echolink node list at <http://www.echolink.org/links.jsp> to determine the availability of a given individual or reflector node.
2. The User dials the desired IRLP node connect command **NNNN for IRLP or #NNNNNN (up to 6 digits in node number)**
3. The IRLP or Echolink system responds with a voice message indicating connection to the distant node.
4. The go ahead "courtesy" tone will be slightly delayed for the 1 second turnaround time and will change to indicate to all users that the repeater is in the IRLP or Echolink mode and to refrain from local activity.
5. If the distant individual node is busy with IRLP or Echolink or other RF traffic, the IRLP system will respond with "...node busy...".
6. It is desirable to monitor for 10 seconds prior to voice announcing your CQ, call, and location so that a QSO that might be in progress on the distant repeater can adjust to your node connection.
7. It is desirable to wait 1 second or more between each transmission to account for turn system around delays.
8. It is also recommended to wait 1 second or more after PTT to starting voice
9. If there is no activity by either node within about 4 minutes, the nodes will be automatically disconnected.
10. Especially while connected to an IRLP reflector or Echolink Conference, it is common courtesy to pause between transmissions to allow breakers and for nodes to be able to enter DTMF disconnect commands.
11. When connected to a reflector, it is desirable to not have a long separate rag chew on the local node. Please disconnect the node from the reflector.

Disconnecting a node connection:

1. The Member dials the IRLP or Echolink disconnect command **73**
2. The distant IRLP or Echolink node will announce with a specific voice message that you are disconnected from the node.
3. The go ahead courtesy tone will return to normal to indicate to all users that the repeater is not in the IRLP or Echolink mode.

Emergency Disconnect of the IRLP system from the Fox Repeater:

If you experience a situation where constant interference, noise, or unwanted communications are coming from the IRLP or Echolink system, the Member control operator should inform a FRRL Repeater Committee Member to completely disable the IRLP connection.

UHF Repeater IRLP and Echolink access rules

Any licensed amateur radio operator may initiate or disconnect IRLP or Echolink connections as desired. The UHF Repeater is a limited and shared resource. Common courtesy shall prevail in determining the priority, sequence, and duration of connections. If you are the only user at a given time, feel free to continue to use the resource. You should remain vigilant of other users who may wish to join the conversation or initiate a different IRLP or Echolink connection and appropriately yield to the next user in a timely fashion. The initiating (or responding) user becomes the Control Operator for the duration of the connection. The responsibility of the Control Operator is to guide new users through the IRLP or Echolink experience, monitor the communications for inappropriate content or language, and be available to disconnect the IRLP or Echolink connection if needed. Although there is an inactivity timer which will automatically disconnect the IRLP connection, it is strongly urged that only manual disconnects be used. A Control Operator can transfer the responsibilities to another Control Operator with mutual consent.

Repeater Dues are \$10 per calendar year starting every January 1. General membership in the Fox River Radio league is \$20 per year. Membership in both the FRRL and Repeater is \$30 per year. FRRL and Repeater members are encouraged to solicit membership and keep track of regular and consistent users of the Repeater system.

IRLP Guidelines from their web site (www.irlp.net).

REFLECTOR ROUND TABLES

Round tables are conversations involving more than 2 parties. Unlike a net a roundtable requires some organization to keep the conversation thread passing in an orderly fashion from party to party. Do not become intimidated if a group grows and, if mobile, do not be overly concerned if you are unable to remember all or any callsigns. Just try and remember the call and or name of the next station that you pass it to. If you are listening and wish to break into a conversation, let a cycle go by so you know the participating station are then announce your callsign during one of the "pauses". You should be recognized and then when finished with your transmission be sure to specify who you are turning it over to. If you do not specify a station to pick up the connection chaos will result as 2 or more stations may try to talk at once.

ANNOUNCING YOUR PRESENCE

Announcing you are looking for a QSO or acknowledging someone else's call differs from your local repeater were you usually just give your call. With IRLP your transmission is now being heard on many repeaters around the world and others may not just be sure what your intentions may be. To resolve this it is a good idea to give your callsign (*phonetically*) along with your name and your QTH and state you are monitoring for a call. Many listeners are mobile and may only pick out your prefix, your name or possibly just your QTH.

ESTABLISHING A CONTACT

When you hear a station that you wish to speak with always identify who your call is meant for. It is not a good idea to simply state your call but rather your call and your intentions. **Scenario:** Several stations including a DX station **complete** a QSO and you wish to contact the DX station. **Action:** *VK3xxx this is Joe K9xxx in Kalamazoo Michigan.* By doing this rather than just IDing with your call, you leave no question who you wish to speak with. A simple ID many times goes unanswered as neither station knows who you are calling.

BREAKING INTO A QSO

When an existing conversation is underway and the topic of conversation is of interest, just give your callsign between breaks and the next station to take it should acknowledge you and bring you into the QSO. **PLEASE** do not break into an existing QSO because you want to work one of them. This is poor ham radio etiquette and on HF would result in a severe chastisement :-)

NETS ON A REFLECTOR

Nets on a reflector without prior approval of the Reflector manager are highly frowned on and will no doubt be quickly challenged by someone. A roundtable can sometimes be construed as a net so be somewhat careful if a group gets to large as it tends to monopolize the reflector. If any wishes to organize a reoccurring net or use a reflector for a special purpose such as the Scouts annual JOTA weekend (Jamboree On The Air), they need to contact the reflector custodians.

MAKING A DIRECT CONNECTION

First of all listen on your local machine for at least 15 -30 seconds before transmitting and then ask if the repeater is currently in use. Assuming all is clear, **identify your self** and give the node name or number you wish to call . Example: *"VE3xyz for the Sydney node"* - - then enter the ON code for the node and release your PTT. Your local repeater should come up with a carrier as it waits for the connection to be authenticated. This can take a few seconds of dead-air so don't be concerned. When the connection is confirmed, the voice ID of the destination node will be transmitted back to you as well as your nodes voice ID to the other repeater.

NOTE: If your node is already connected to another node or reflector, a greeting will play saying; - *"your node is currently connected to...ID of the connection"*) *In this case confirm if anyone desires the connection to remain up before dropping by using the OFF code..*

Once connected and after hearing the confirming voice ID, **wait** at least 15 seconds before transmitting as.....

- *The repeater may be in use, and your entry may have occurred between transmissions.*
- *The voice ID of your node is longer than the voice ID of their node, and the connection is not made until the ID is fully played.*
- *Their computer may be slower, and hence take longer to process the connection than yours.*

Press and hold the microphone PTT for a second and then announce your presence and your intention such as you are calling someone specifically or just looking for a QSO with another ham in that city.

If no response is heard, announce your call and your intent to drop the link and then touch-tone in the OFF code. *Not a good idea to transmit touch-tone commands without first giving your call-sign. Not only is this courteous it is a regulatory issue in some countries who may be connected to the reflector.*

Some nodes are configured so you cannot connect to them if that repeater is active. In this case you will receive the message *"The node you are calling is being used locally"* If you receive this message wait 5 or 10 minutes and then try again.

If you stay connected to a node and there is no activity on your repeater for 4 minutes, the connection will time out and automatically disconnect with a voice ID disconnect message on both nodes.

CONNECTING TO THE REFLECTOR

As above, listen to your local machine for local use and then announce your intention for the Reflector before keying the ON command. When you hear the confirmation ID always WAIT at least 15 seconds before transmitting as you are most likely now connected with many repeaters and a QSO could be in progress. If after 15 seconds you hear nothing, identify yourself and indicate you are listening to the Reflector from *"City and, Prov./State, Country"*. *With the world wide IRLP activity your local repeater now has world wide coverage thus the suggestion to better detail your QTH.*

Don't be in a hurry to hear someone come back to you. You may have to do a bid of pleading from time-to-time to un-lodge someone from whatever they are currently involved with.

By default, connections to the reflectors now time out with no activity however many node owners set this period for a long period so it is not unusual for repeaters with minimal traffic to stay connected to the Reflector for extended periods of time. When or if the node times out from a Reflector connection a standard time-out greeting will precede the timeout saying, *"Activity time out ... Reflector xxx, link off"* *If you are new to IRLP you should always consult with your local node sponsor to confirm the local guidelines on reflector connections in your area.* If you hear or wish to engage in a prolonged rag-chew on your local repeater (*long discussion of a local nature*) out of courtesy to other node listeners drop the reflector.

ERROR MESSAGES

From time-to-time you may receive error messages when attempting to connect with a node or reflector. The most common ones are:

"The node you are calling is not responding, please try again later"

This is caused by a loss of internet connectivity to one end of the call attempt.

"BEEP Error- The call attempt has timed out, the connection has been lost"

This error occurs when a node is OFF-LINE. Some nodes such as in the UK use dial-up connections and then, only for short periods. Also there may be temporary net or node problems.

"The Connection Has Been Lost"

If the internet connection drops, this error message will be heard. I found this out when I accidentally kicked out my network cable while working around the node computer.

DO'S and DON'TS

In summary then a few do's and don'ts

- **DO** pause between transmissions to let other in or others to enter DTMF command.
- **DO** identify before sending DTMF command tones.
- **DO** hold your microphone PTT for about 1 second before talking to allow all systems time to rise.
- **DO NOT** rag-chew on your local repeater while connected to the reflector.
- **DO** pause for 10 seconds or when entering the reflector before talking.
- **DO NOT** start or plan a Net without pre-authorization from the reflector owner

SUNDAY NETS

Every other Sunday an IRLP net is held inviting check-ins from around the world which is an excellent chance to hear IRLP at its best. To participate in the net there must be a local net controller for your node otherwise you will only be able to monitor. A few guidelines which will be enforced by the Central Net Controller will be

- *Do not connect your local node to the net during net times unless someone is acting as a local net controller.*
- *Do not make calls directly to other stations during the net.*
- *Above all NO local conversations during the net while connected to the reflector.*
- *Do not attempt a call unless your local net controller has you as a pre check-in.*
- *Disconnect our node if any local interference is present.*
- *Keep your check-in short and to the point. Remember that several hundred others may be waiting for a chance to check-in as well.*

Check the [Official IRLP Net web page](#) at for details on schedules