

# LINK TO THE WORLD

The CAPITOL PEAK REPEATER CAN NOW BE LINKED TO REPEATERS THROUGH OUT THE WORLD. A link has been established connecting the 47 repeater to other repeaters world wide via the Internet. The Internet connection uses IRLP (Internet Radio Linking Project) protocol which is a system using Voice-over IP (VoIp) on the Internet to connect repeaters together anywhere in the world. The Internet is used as a linking medium only and THERE IS NO ACCESS TO REPEATERS FROM THE INTERNET ITSELF.

There are currently about 2000 repeaters world wide using IRLP. Each repeater using this system is called a NODE and is assigned a number (somewhat like a phone number). The Node number for the Capitol Peak Repeater is 3062. The list of world wide repeaters and their node numbers is presently over 24 pages long and is too lengthy to print here. The complete list of nodes and information on IRLP can be obtained at <http://status.irlp.net/statuspage.html> . If you do not have Internet access, contact the repeater Secretary/Treasurer.

There are two common modes for an IRLP world wide connection. Direct repeater-to-repeater or node to node or one repeater to many repeaters. Connecting to many repeaters is done by connecting to a REFLECTOR. This would be like connecting into a party line where there could be as few as two or three repeaters or as many as a hundred repeaters connected together anywhere in the world. Direct connect is just like it sounds where repeater (node) "A" connects directly with node "B". With this type of link the two nodes are interconnected and no other IRLP connections are possible. Direct connect is preferred for city-to-city chat.

## MAKING A DIRECT CONNECTION

First of all listen to the 47 repeater for at least 15 to 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 you wish to call.

Example: "K7xyz connecting to Sydney Australia" – then enter the node number (ON CODE) for Sydney (6000) and release your PTT. The 47 repeater will come up with a carrier as it waits for the connection to be authenticated. This can take a few seconds of dead-air time. When the connection is confirmed, the voice ID of the destination node will be transmitted back to you. The voice ID of the 47 repeater will also be sent to the connected node.

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 our repeater may be longer than the 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 ours.

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 . Do not transmit touch-tone commands without first giving your call-sign. Not only is this courteous it is a regulatory issue in most countries.

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 to 10 minutes and then try again.

Once connected, *leave long pauses between transmissions*. There may be several RF links and computer links between the two cities and a long pause will insure that all connections are made. Also remember the time difference between us and other countries. I brought up the South East Africa node in Durban (node 8300) at 8:00 pm our time. It was 5:00 am there. I was lucky and caught ZR5NKT on his way to work.. Usually though, you won't find many people listening to their repeater at that time of morning.

If you stay connected to a node and there is no activity on the 47 repeater for 5 minutes, the connection will time out and automatically disconnect with a voice ID disconnect message on both nodes.

## CONNECTING TO THE REFLECTOR

There are presently 25 to 30 IRLP Reflectors through out the world. These are very wide bandwidth areas on the Internet that are used for party-line linking of several repeaters (nodes). It is possible to have 50 to 100 repeaters through out the world connected together. Usually though, you will find 1 to 20 repeaters on any particular reflector.

As for direct connect, listen to the 47 repeater 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 your city, state, and country.

Don't be in a hurry to hear someone come back to you. You may have to do a bit 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. For the 47 repeater, this time is set at 10 minutes. If you hear or wish to engage in a prolonged rag-chew on 47, out of courtesy to the other people in the world, please drop the reflector.

With reflector use the first thing to remember is to leave a gap between transmissions.  
The three main rules when connected to a reflector:

**Pause**  
**Pause**  
**Pause**

Due to the slight increase in delays created by multiple tone squelch radios in the links between the repeater and IRLP link radio, a slight change in our normal operating procedures is required. By leaving a pause between transmissions it.....

Allows users on other nodes a chance to check in.

Allows other nodes time to send touch-tone commands to drop their node.

The most important guideline to remember is leaving a pause after pressing the PTT button as well as between transmissions.

## NETS

Nets usually occur on repeaters between 6:00 pm and 10:00 pm their local time. Please be aware of the time difference between us and other cities and countries. Do not bring up other repeaters during their net times.

There are also scheduled nets on the various reflectors during these times. Information on the IRLP nets can be obtained at [www.irlp.net](http://www.irlp.net).

## CONNECT TO THE WORLD ON THE 145.47 REPEATER

The Capitol Peak Repeater is connected to the Internet by a UHF radio link to Olympia where it interfaces to a computer with a high-speed Internet connection. This link is NOT always in the ON condition. Also, it automatically turns off at 5:00 pm. Before using IRLP, insure that this link is turned on. The on and off codes will be given to you once you become a member of the Capitol Peak Repeater.

Once the IRLP link is on all you need is the node number of the station or repeater you wish to connect. To connect to Manchester England, all you need to do is input 5450. The connection and quality is like talking across the street.

Enjoy and have fun.

For the complete list of nodes and reflectors see: <http://status.irlp.net/statuspage.html>

