

Rural Training Center – Thailand (RTC-TH)

FOCUS



**Community-based Environmental Education
for the Self-sufficiency and Sustainability of
Small Rural Family Farms**



Joining the GERC Net via EchoLink®



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Thailand
Ready to Serve and Support
Our Community



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HS0ZHM
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Created by G.K.. Lee for the RTC-TH

The RTC-TH EmComm Program

The Rural Training Center-
Thailand Emergency
Communications program
is a volunteer effort to
provide emergency

amateur radio communications for
local community self-sufficiency and
sustainability in times of need.





The Rural Training Center-Thailand was created to honor the life and memory of Mr. Tang Suttisan, a father, farmer and former custodian of Ban Na Fa Elementary School who appreciated and valued education.



Advisory Notes



The RTC-TH is an all volunteer organization providing community-based environmental education for self-sufficiency and sustainability of small rural family farms with no formal affiliations to any other organization.



GERC was created to provide local emergency communications for members of their church. Natural disasters do not distinguish between groups or political boundaries. While GERC gives priority to its members, it does not ignore those in need and strives to educate everyone about emergency preparedness.



The RTC-TH EmComm + GERC

The RTC-TH EmComm and GERC mutually agree to support each other in times of emergencies.

Both groups are committed to emergency preparedness and emergency communications training, general education / training about amateur radio.



www.neighborhoodlink.com/org/rtcth



www.neighborhoodlink.com/org/gerc



What is a Net?

A Net is a regularly scheduled on-the-air meeting of Hams (amateur radio operators) who share a common purpose.





GERC Net

Glendora Emergency Response Communications

34.116508 N 117.854851 W DM14bc UTC -8 ITU 6 CQ 3

This is a directed Net every Tuesday
(except the 3rd Tuesday) 2030 Hrs Pacific
Time / 0430 UTC held simplex or via
EchoLink® Node 358124



Mark (N7YLA) Net Control & GERC Founder

California uses Daylight Saving Time



GERC Net

Glendora Emergency Response Communications

34.116508 N 117.854851 W DM14bc UTC -8 ITU 6 CQ 3

Anyone can join.
Thai Hams can
check in via
EchoLink® Node
358124

The GERC Net is on Tuesday evening in CA
which is Wednesday morning in Thailand
California is on Daylight Saving Time

CA is UTC -8

Daylight Saving Time changes 0200 Local Time
Starts: 2nd Sun of Mar; Ends 1st Sun of Nov

CA Pacific Standard Time
UTC -8

Thailand Time
UTC +7

2030 hrs = 0430 UTC+1D

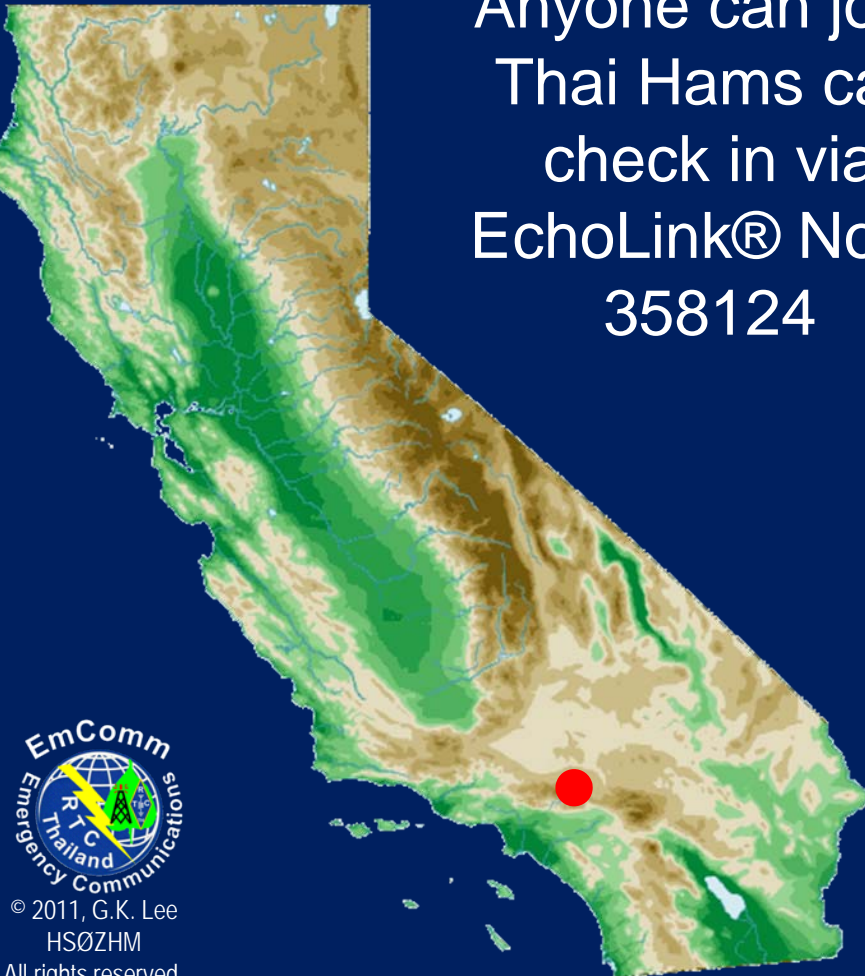
1130 Wed

CA Pacific Daylight Time
UTC -7

Thailand Time
UTC +7

2030 hrs = 0330 UTC+1D

1030 Wed



Why should Thai Hams join the GERC Net?

- Practice / improve your English listening skills
(You can just monitor and not speak.)
- Practice / improve your English speaking skills
- Learn about opportunities to participate in international amateur radio demonstrations
- Make new contacts & friends





GERC Net Protocol

Glendora Emergency Response Communications

34.116508 N 117.854851 W DM14bc UTC -8 ITU 6 CQ 3

- 2015-2030 Net Control announces the GERC Net
- 2030 Net Control begins the Directed Net
- Net bulletins; call for bulletins from GERC members
- Roll call of GERC members from previous Net check-in
- Roll call of EchoLink® check-ins by order of EchoLink log-on to Node 358124
- Call for any late GERC check-ins or visitors
- Round table discussion in order of check-in
- Net concludes at end of the round table



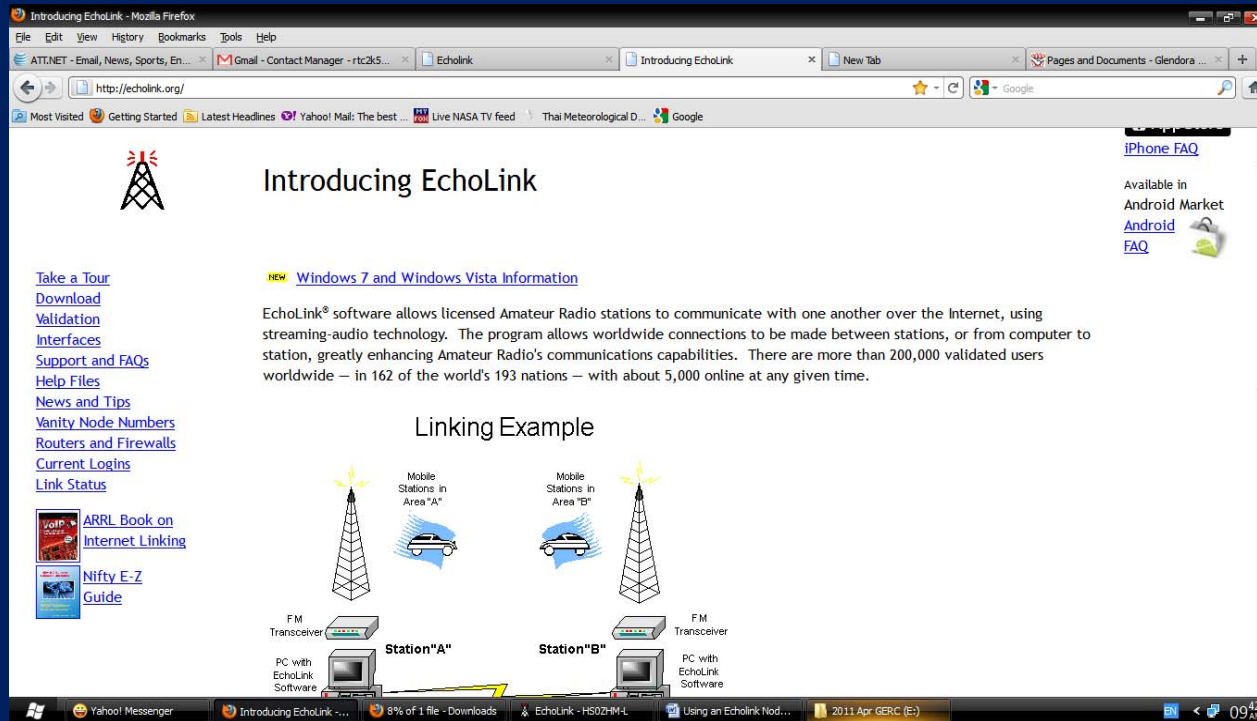
Some Events with GERC

In the past year, the RTC-TH has provided international support for GERC in various events.



EchoLink® is Free

(to licensed amateur radio operators)



- You need your FCC license number to get the download
- After installing the software, you use it to do the authentication / validation process.

On the Download page


Download - Mozilla Firefox

File Edit View History Bookmarks Tools Help

ATT.NET - Email, News, Spo... Gmail - Contact Manager - rt... Echolink Introducing EchoLink Download New Tab Pages and Documents - Gle...

http://echolink.org/register_data.jsp

Most Visited Getting Started Latest Headlines Yahoo! Mail: The best ... Live NASA TV feed Thai Meteorological D... Google




Download EchoLink

EchoLink® software is offered free of charge to licensed Amateur Radio operators worldwide, for Amateur Radio use only. Please note that **you must hold a valid Amateur Radio license** in order to use EchoLink. After installing the program, you must provide proof of license if you wish to use it; see [Authentication](#) for more information.

Please register by entering your callsign and e-mail address below. Then, choose Submit for instructions on how to download.

Callsign:

E-Mail Address:

 ARRL Book on

- Enter your call sign
- Enter a valid E-mail address
- Click on “Submit”

While you are waiting....

Read what you need for the validation process using this link
http://www.echolink.org/validation_docs.htm

It is easiest to scan your valid license documents in jpg or gif to upload when requested to do so.



Call Sign / Number K16GIG	Grant Date 11-07-2006	Expiration Date 11-07-2016	File Number 0003808615	Print Date 04-16-2009	Effective Date 04-15-2009
Operator Privileges General		Station Privileges PRIMARY		THIS LICENSE IS NOT TRANSFERABLE Special Conditions / Endorsements: NONE	
LEE, GREGORY K C/O SHELBY ROBERT MAN 4701 NATICK AVE APT 206 NATICK, MA 01907					
AMATEUR RADIO LICENSE FCC Registration Number (FRN): 0015692507 FCC 660 - May 2007					



คณะกรรมการกิจการโทรคมนาคมแห่งชาติ NATIONAL TELECOMMUNICATIONS COMMISSION Kingdom of Thailand	
ใบอนุญาตวิทยุสมัครเล่นระดับกลาง Intermediate Amateur Radio Operator License	
เลขที่ 060251028990	ใบอนุญาต HS0ZHM
ชื่อ-สกุล น.ส. กนกวรรณ	Call sign
ชื่อ-นามสกุล Mr. Gregory Kinn Lee	
เลขประจำตัวประชาชน 9-34080-9-0-0000	ID Number USA 212472375
วันเกิด 31 JUL 2008	Valid Until 30 JUL 2013
ลายเซ็นในใบอนุญาต	ลายเซ็นในใบอนุญาต
Signature	Signature
วันที่ออก 31 JUL 2008	Valid Until 30 JUL 2013
Date of Issue	Valid Until
	Licensing Officer

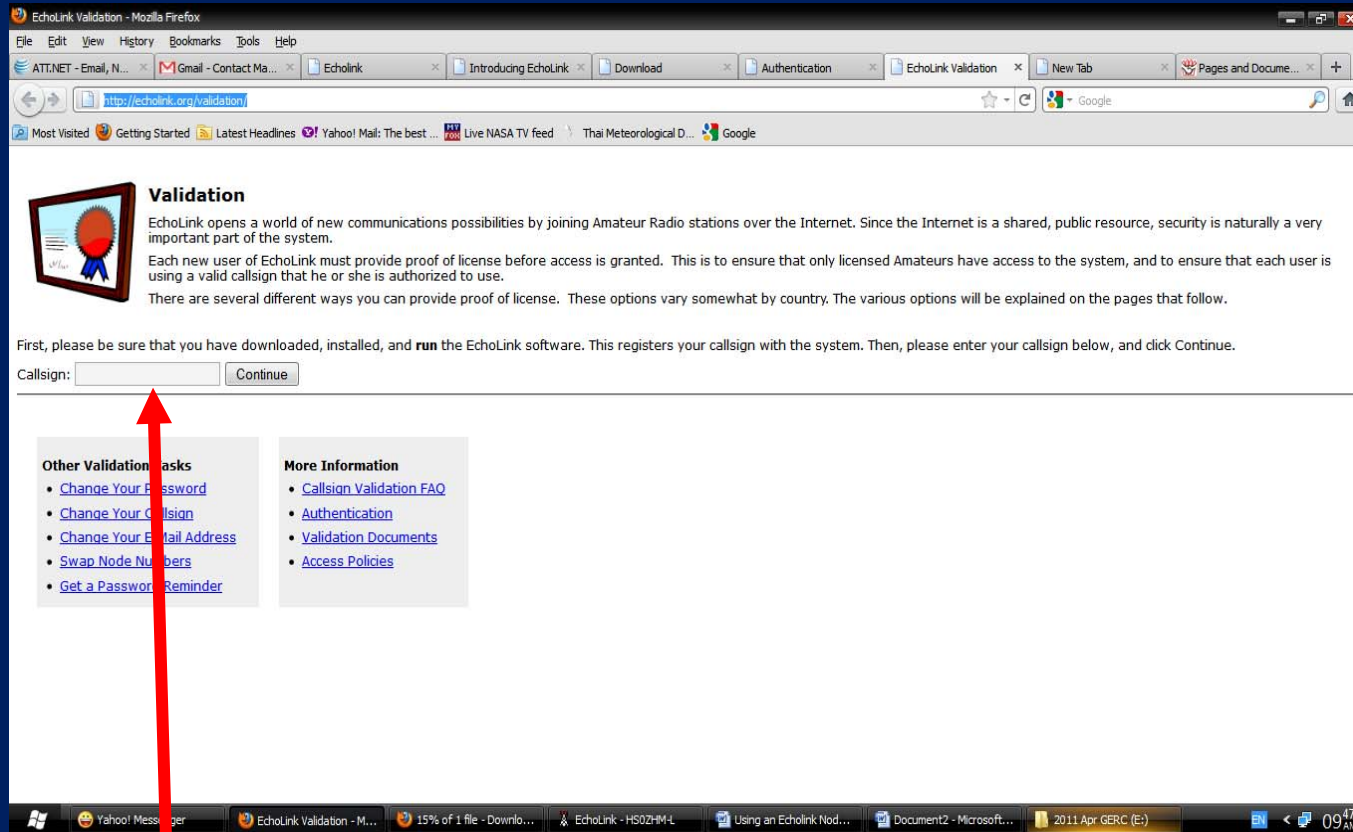
คณะกรรมการกิจการโทรคมนาคมแห่งชาติ ในอนุญาตให้ ตั้ง สถานีวิทยุสมัครเล่น	
ใบอนุญาตฉบับที่ 060252038846	วันที่ 14 ตุลาคม 2552
อนุญาตให้ นาย เกกคุณ สี่	
สัญญาเช่าที่ดิน HS02HM	
ที่อยู่ 84 หมู่ที่ 2 ต.หนองอ้อ อ.ท่าม่วง	
จังหวัด น่าน	
โทรศัพท์ -	
ตั้ง สถานีวิทยุสมัครเล่น	กำลังส่งสูงสุดไม่เกิน 100.000 วัตต์
เพื่อใช้ในการติดต่อวิทยุสมัครเล่น ขั้วต่อ	
คิดค่าธรรมเนียม 2 บาทเศษ 166 บาท 5	
ส.ท่าม่วง อ.ท่าม่วง น่าน 55140	
เสอาภาคสูง 60.00 เมตร	
ใบอนุญาตฉบับนี้ให้ใช้ติดต่อสื่อสารระหว่างผู้ได้รับอนุญาตให้ตั้งสถานีวิทยุสมัครเล่น	
(ลงนาม)	
สำนักงานคณะกรรมการกิจการโทรคมนาคม (18752-213) (784341-0)	

- In the US, you only need your FCC operator license.
- In Thailand, you need both your operator AND station licenses.



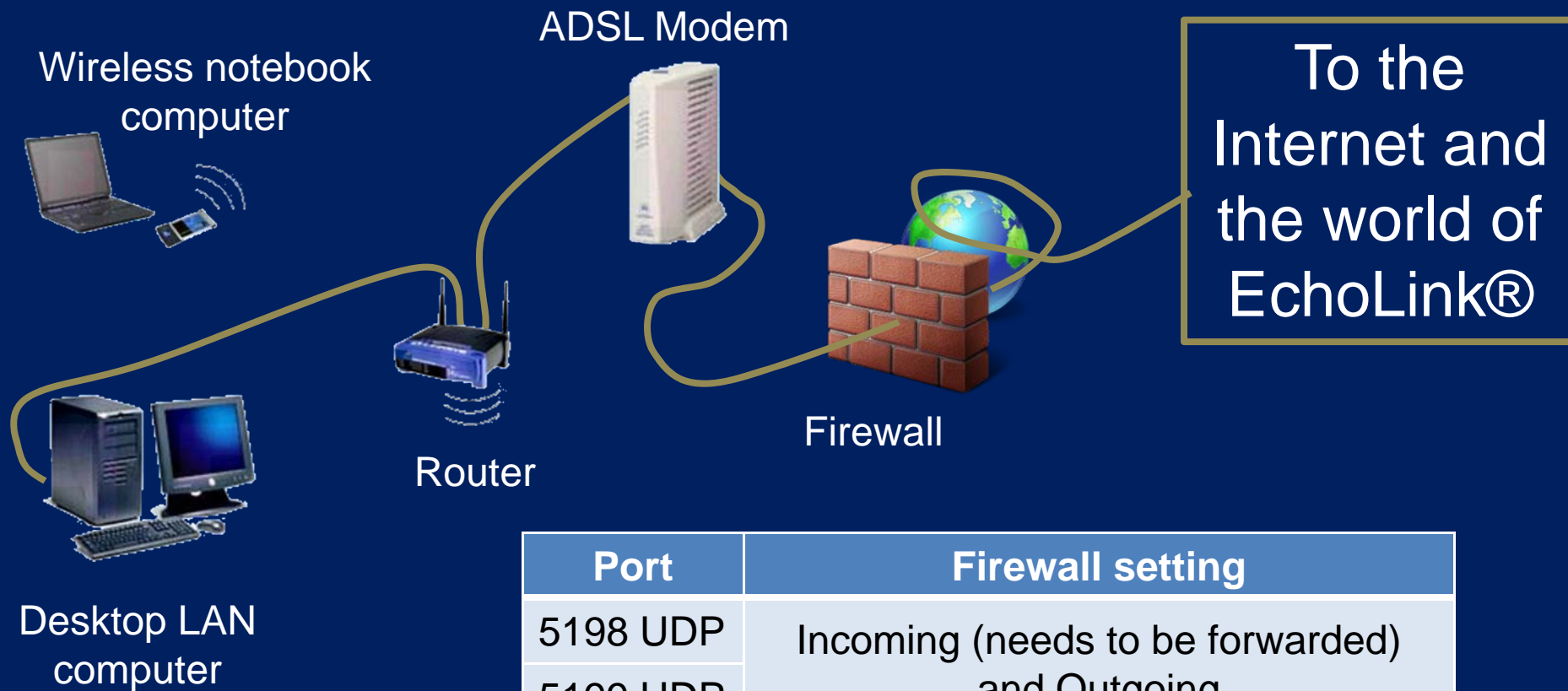
Validation Process

EchoLink® will email you when to begin the validation process.



- You start the EchoLink® program.
- Enter your call sign, click on “continue”
- Then follow the instructions

Firewall / Router Settings



Port	Firewall setting
5198 UDP	Incoming (needs to be forwarded) and Outgoing
5199 UDP	
5200 TCP	Outgoing only

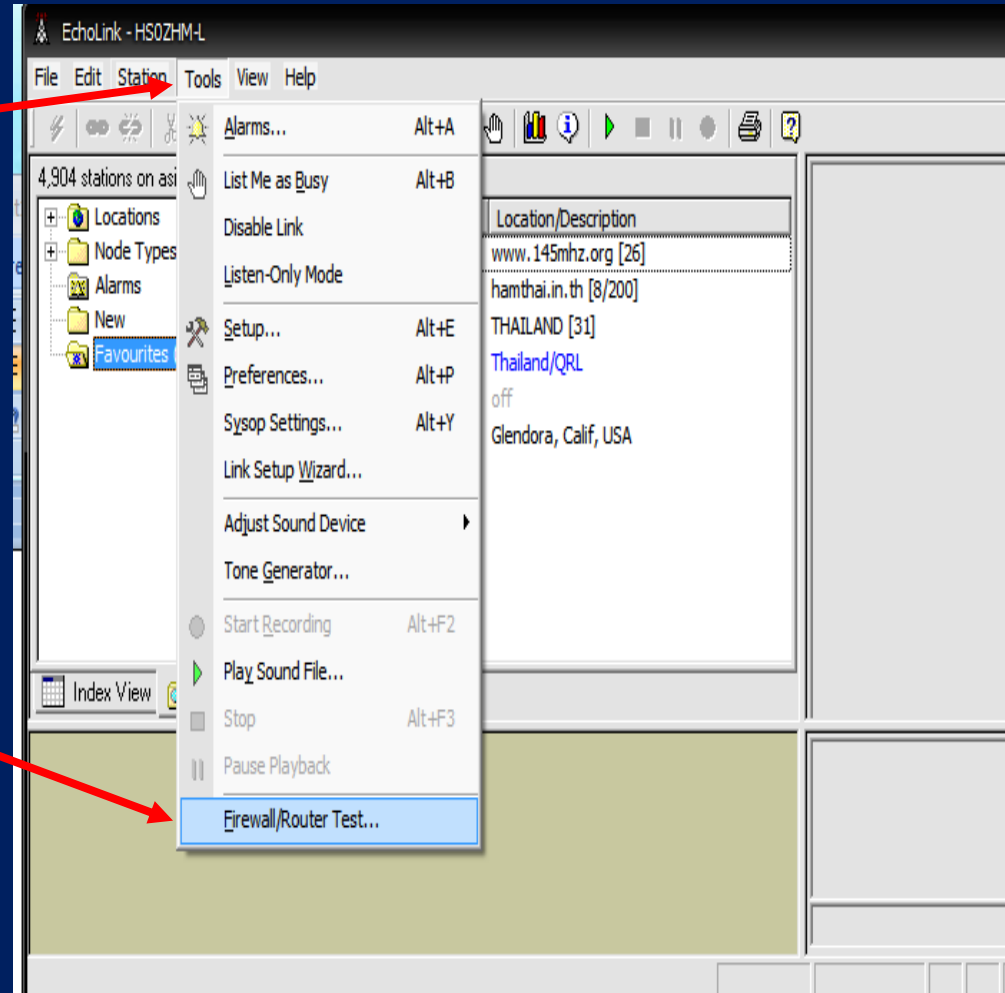
The router port settings can be tricky as each router manufacturer has a different detailed instructions on how to do this.

Contact your ISP Customer Service for help or a computer savvy friend.

You can test the firewall settings

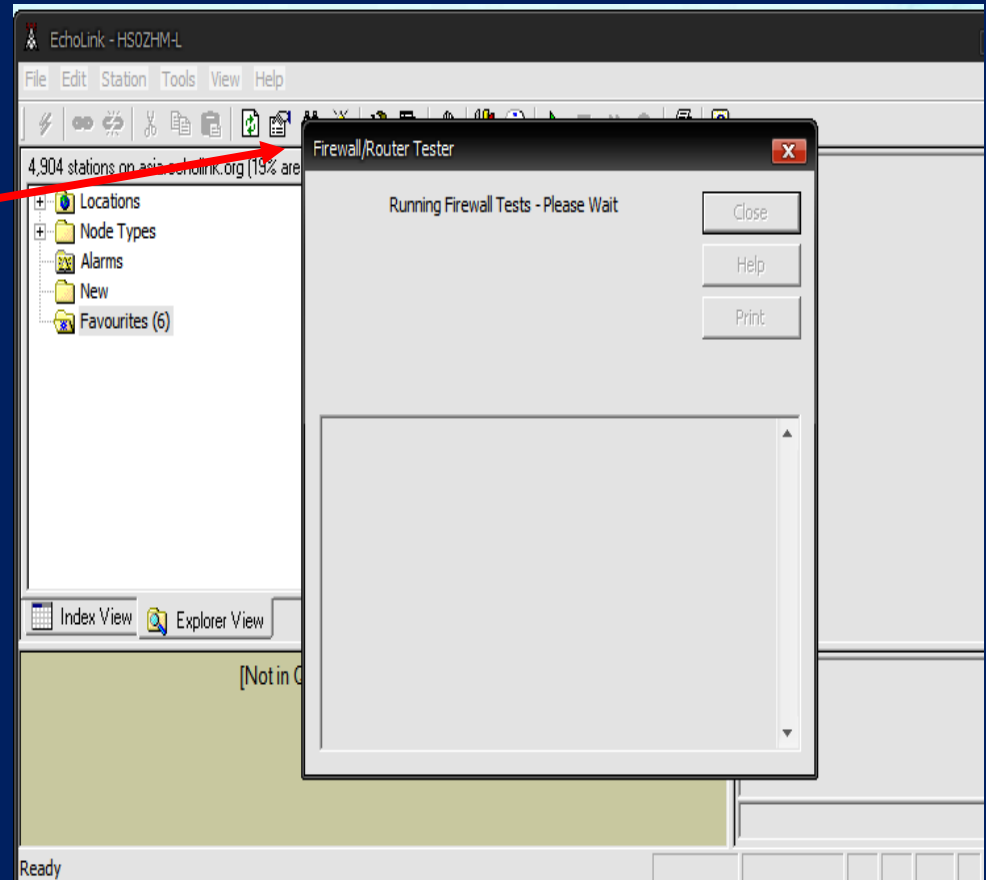
Click on “Tools” to open the drop down menu.

Then select “Firewall / Router test..” and click on it to open the dialog box.



You can test the firewall settings

The
Firewall/Router
Tester box
opens and the
test runs
automatically.

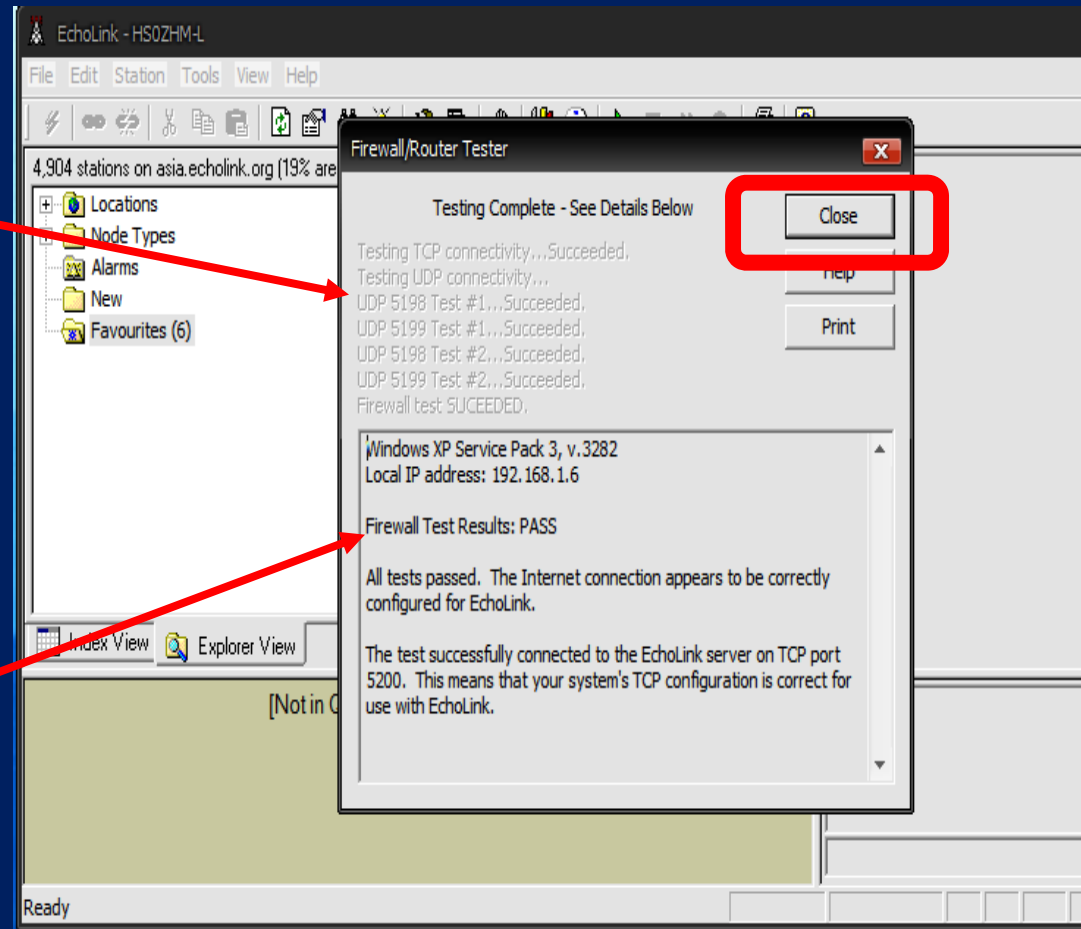


You can test the firewall settings

As the test progresses, these items will fill in automatically.

The results are shown in the window. (If any of the ports fail, they will be detailed in this window.)

Click on “Close” to exit.



If the test fails, make note of what ports failed. This is what needs to be “fixed”. Whoever can help you needs to know these results.

Pass the test: Moving On

Once the ports are properly forwarded, you can use EchoLink® to reach out to the world.

There are many settings you can make in EchoLink®. Consult the User Guide for more details at www.echolink.org/download.htm

We will show two of the more basic settings you may want to do.

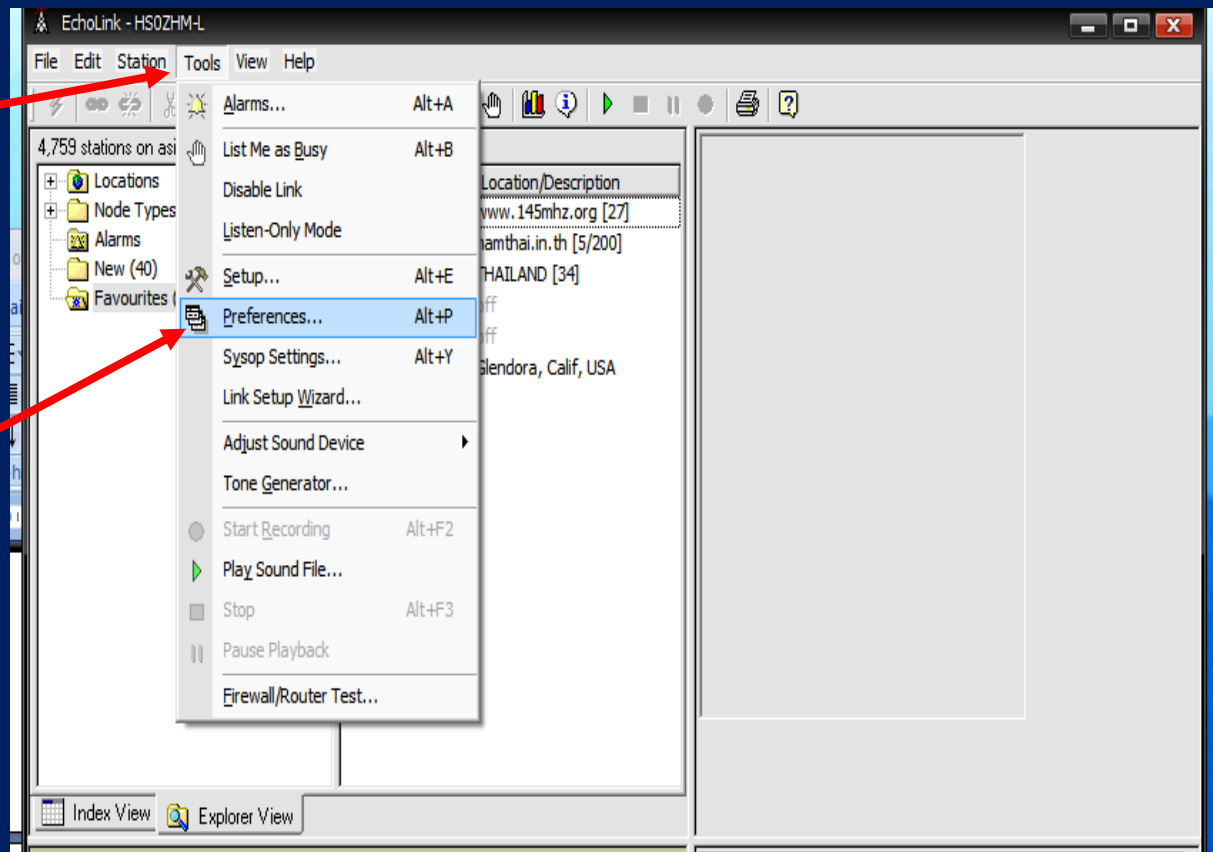
- Setting the PTT (Push-to-Talk) switch
- Using the EchoLink® Test Server

Setting up your EchoLink®

Here's how to set the computer keyboard space bar to work like a PTT (Push-to-Talk) switch on a microphone.

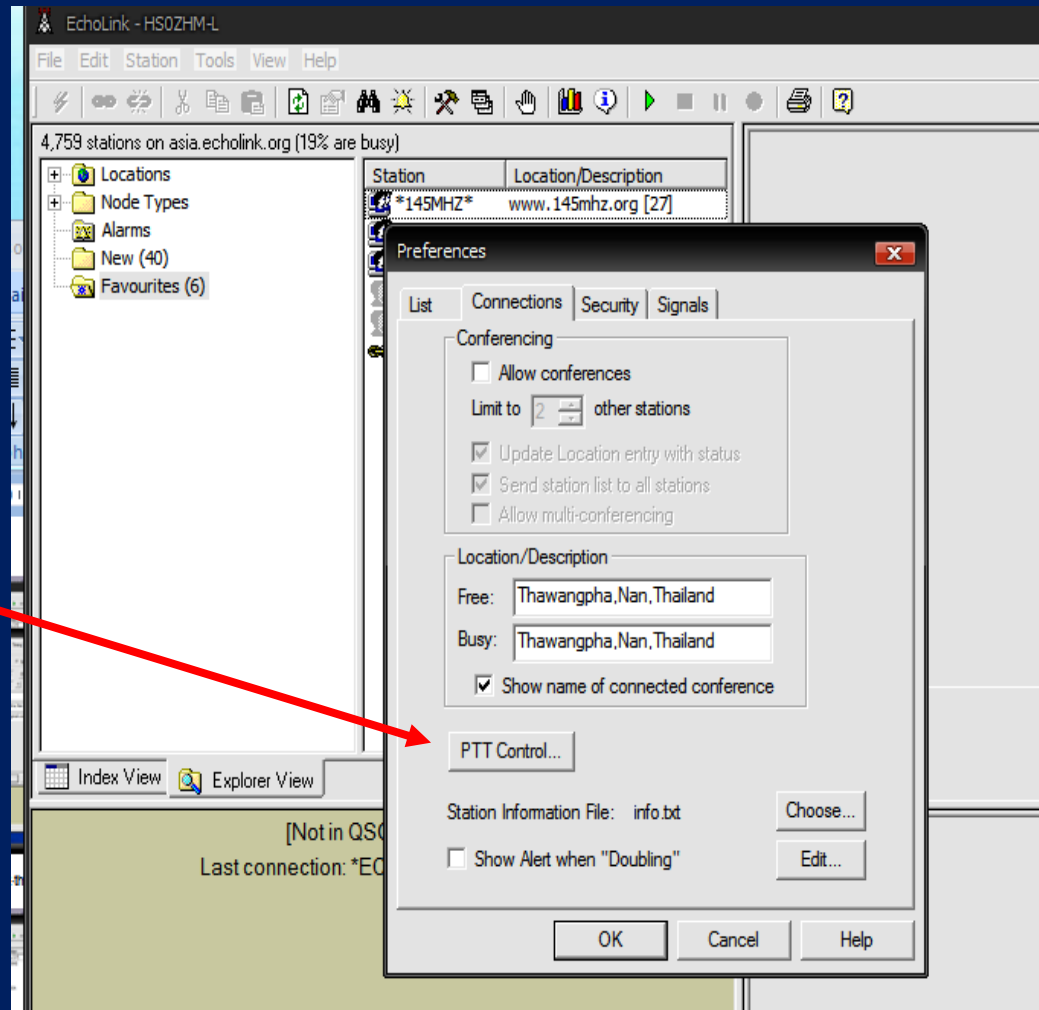
Click on "Tools" to open the drop down menu

Click on "Preferences" to open the dialog box



Setting up the PTT

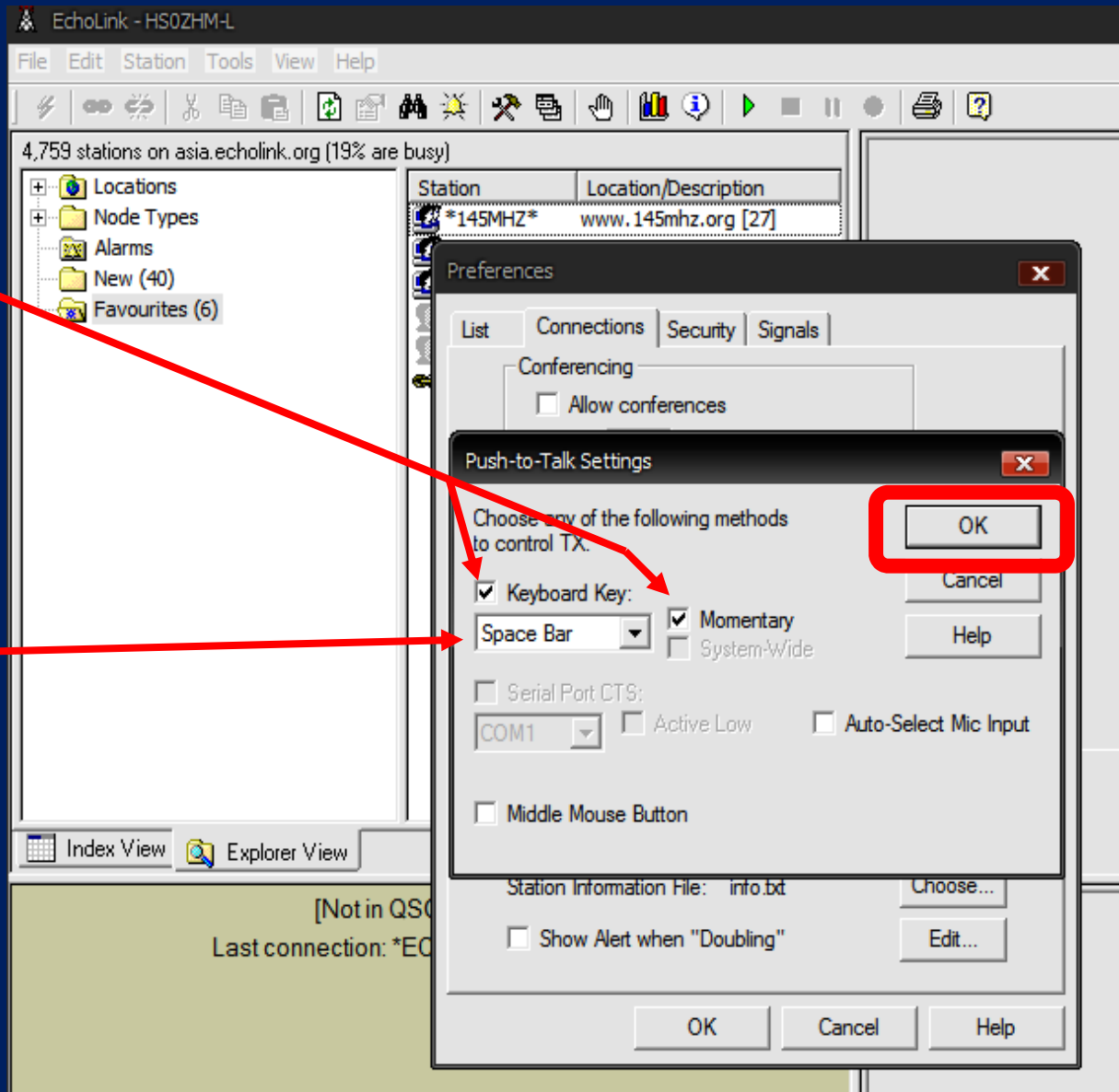
In the “Preferences” dialog box, look for an click on the “PTT Control” button.



the “Push-to-Talk Settings” dialog box

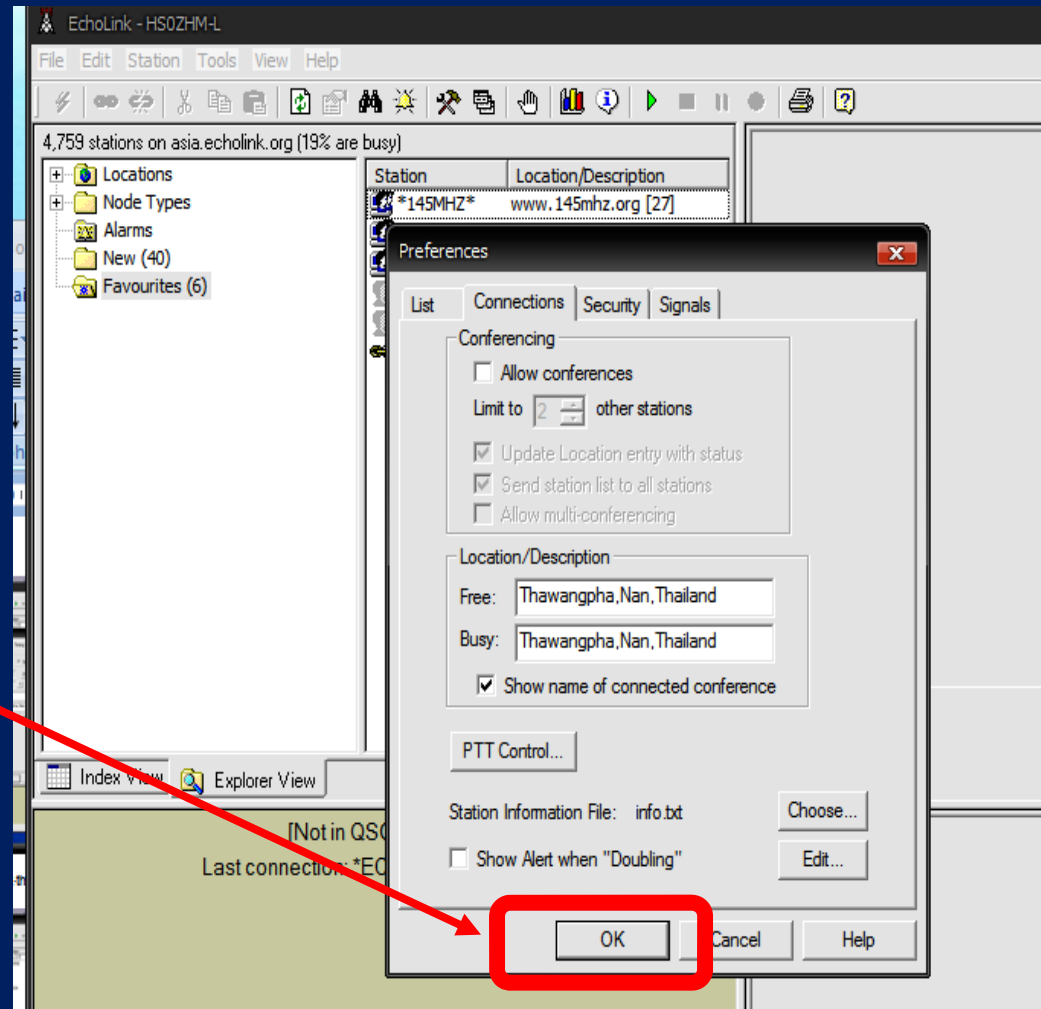
“Check” the Keyboard Key and the “Momentary” boxes.

Use the pull down menu arrow and select “Space bar” boxes; then click “OK”



Close the “Preferences” box

In the “Preferences” dialog box, look for an click on the “OK” button to close the dialog box.

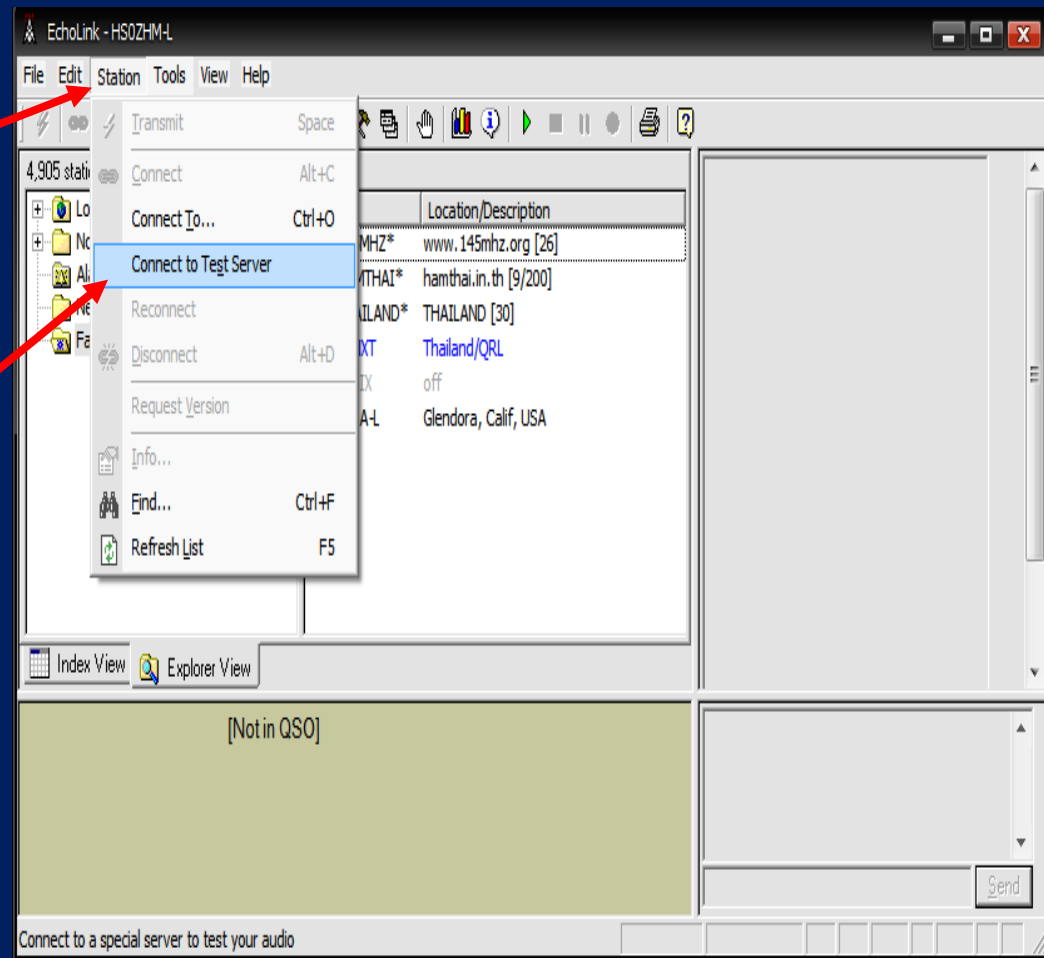


Using the Test Server

This is how to test your PTT on EchoLink®. You can use it to adjust your microphone and speaker volumes.

Click on
“Station” to
open the drop
down menu

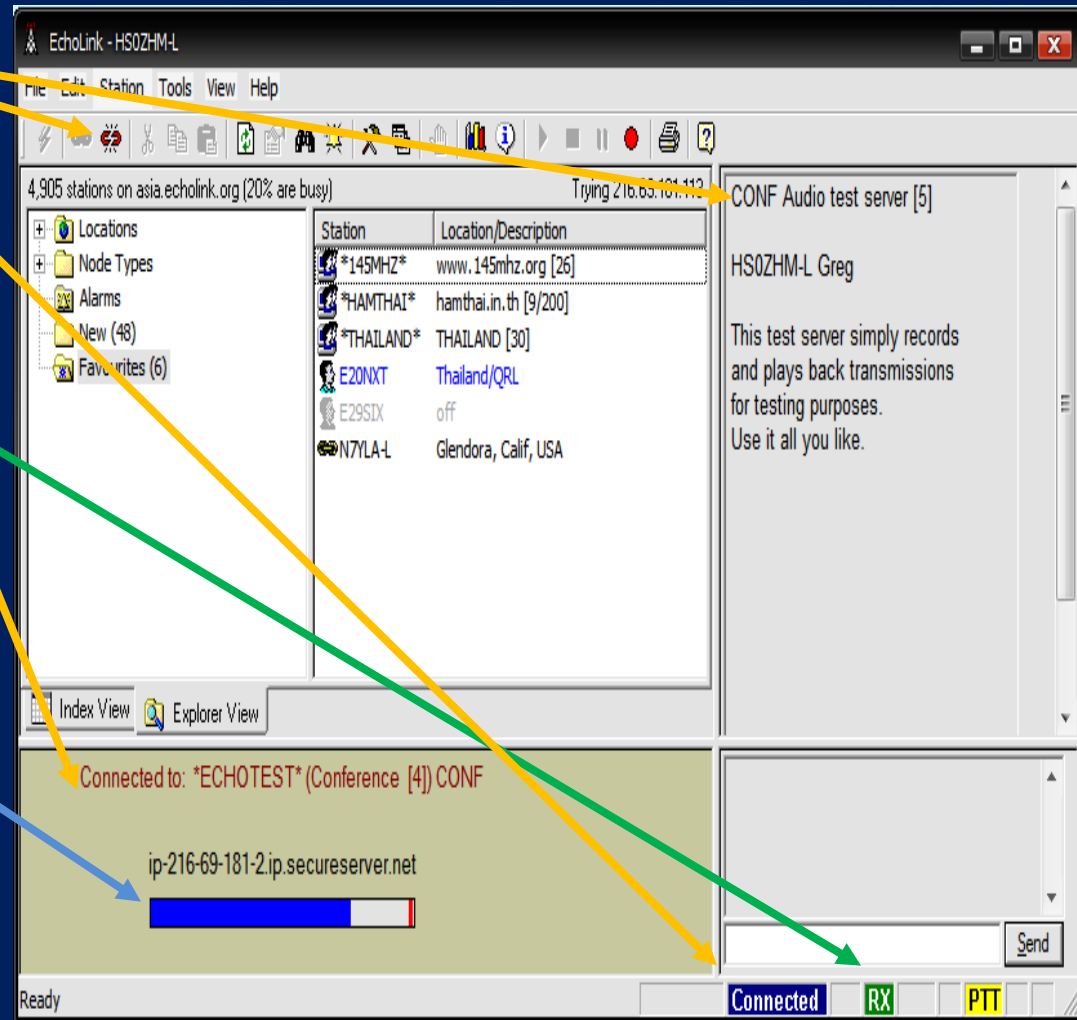
Click on
“Connect to
Test Server” to
open the
dialog box



Using the Test Server

As you connect to the Test Server you will hear the audio message. Watch these items on the screen.

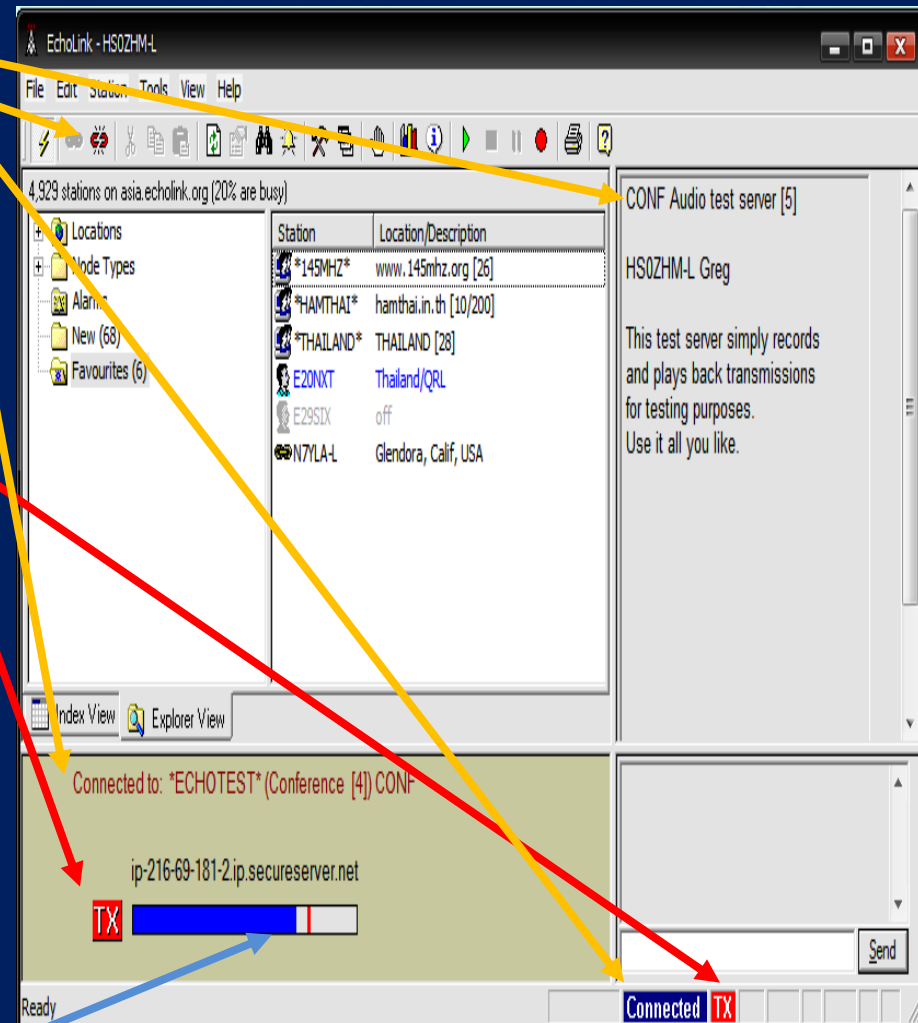
- Connection status
- The server is sending you a message; the RX shows you are in receiving mode.
- The blue bar varies in length with the strength of the audio from the Test Server.



To Transmit to the Test Server

As you transmit to the Test Server watch these items:

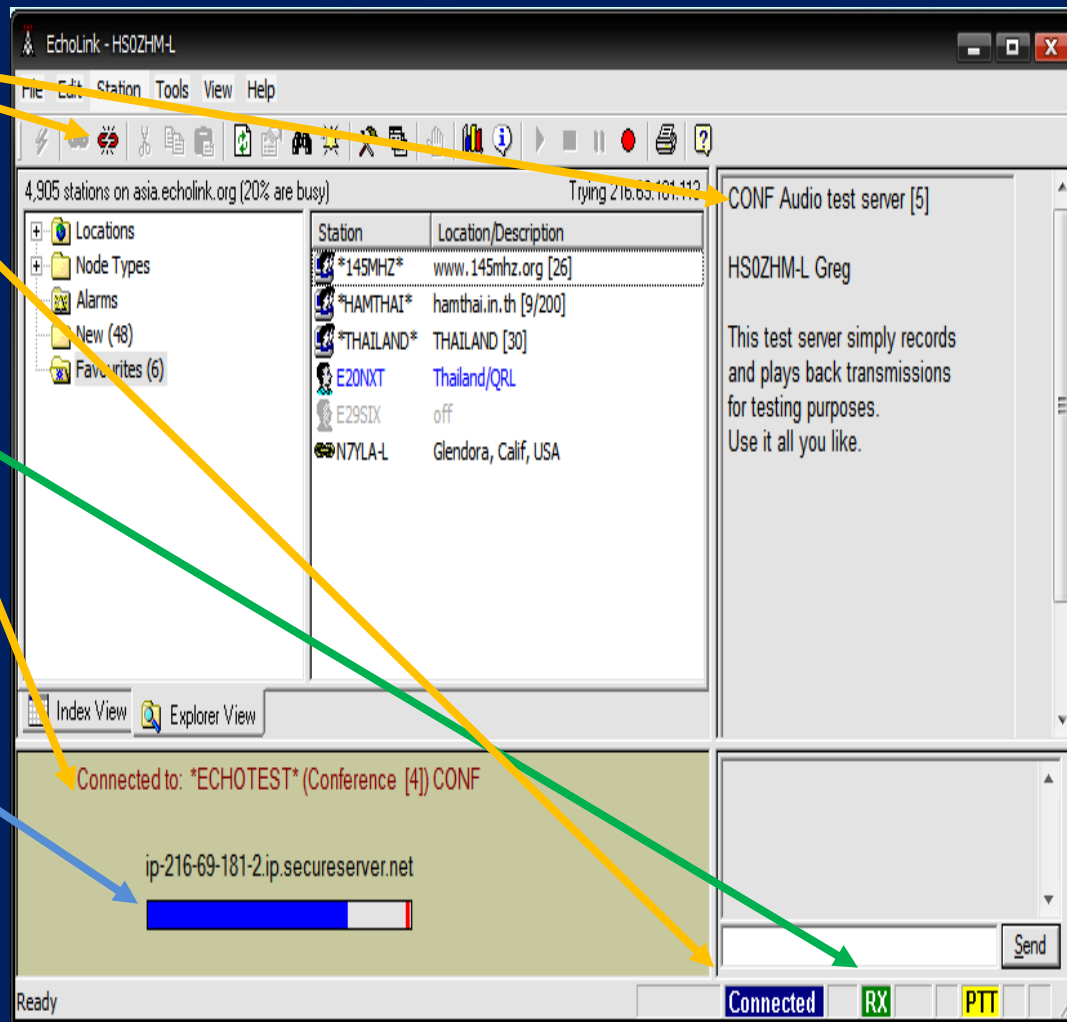
- Connection status
- Push down and hold the space bar; pause 1-2 seconds before speaking; release the space bar when you stop talking.
- When you are speaking; the TX shows you are in transmitting mode.
- The blue bar varies in length with the strength of the audio from the Test Server.



Listen to the Test Server Playback

When you stop transmitting, the Test Server will play back your message. Listen to yourself and watch these items on the screen.

- Connection status
- The server is sending you a message; the RX shows you are in receiving mode.
- The blue bar varies in length with the strength of the audio from the Test Server.



Audio Adjustments

If you need to adjust the sound quality, you can use the standard audio controls for your computer or refer to the EchoLink® User Guide.

Pay attention to this setting/adjustment. It's no sense connecting to the world if they cannot hear or understand your transmission.

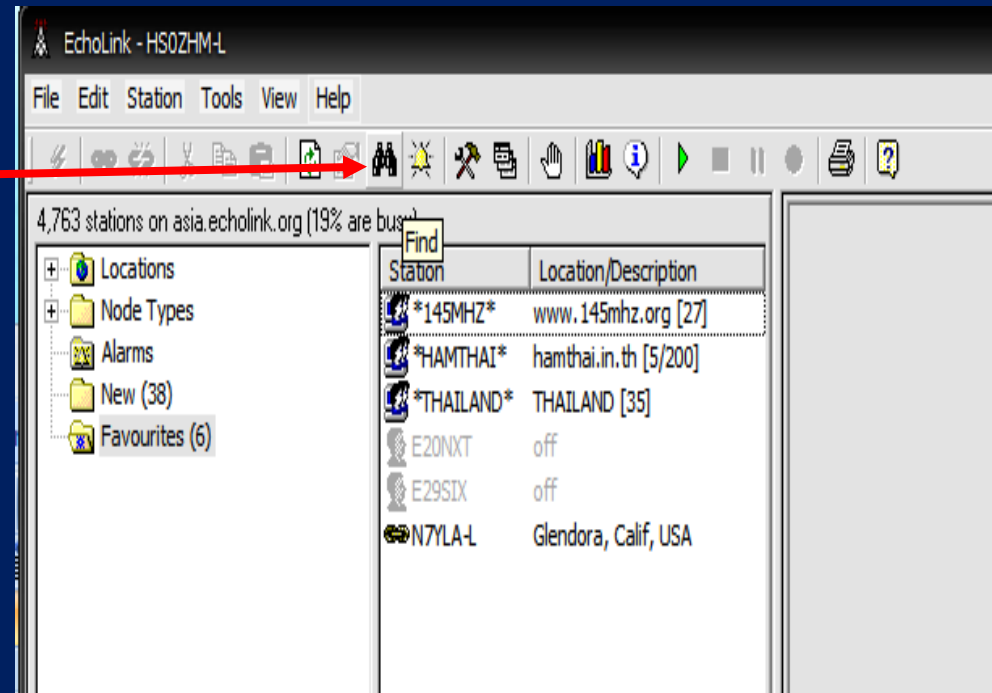
If necessary, get a tech savvy friend to help you.

The appearance of the audio adjustment screen varies depending on the software version you are using.

Connecting to the GERC Net

To find the GERC Net, you need to search for N7YLA-L

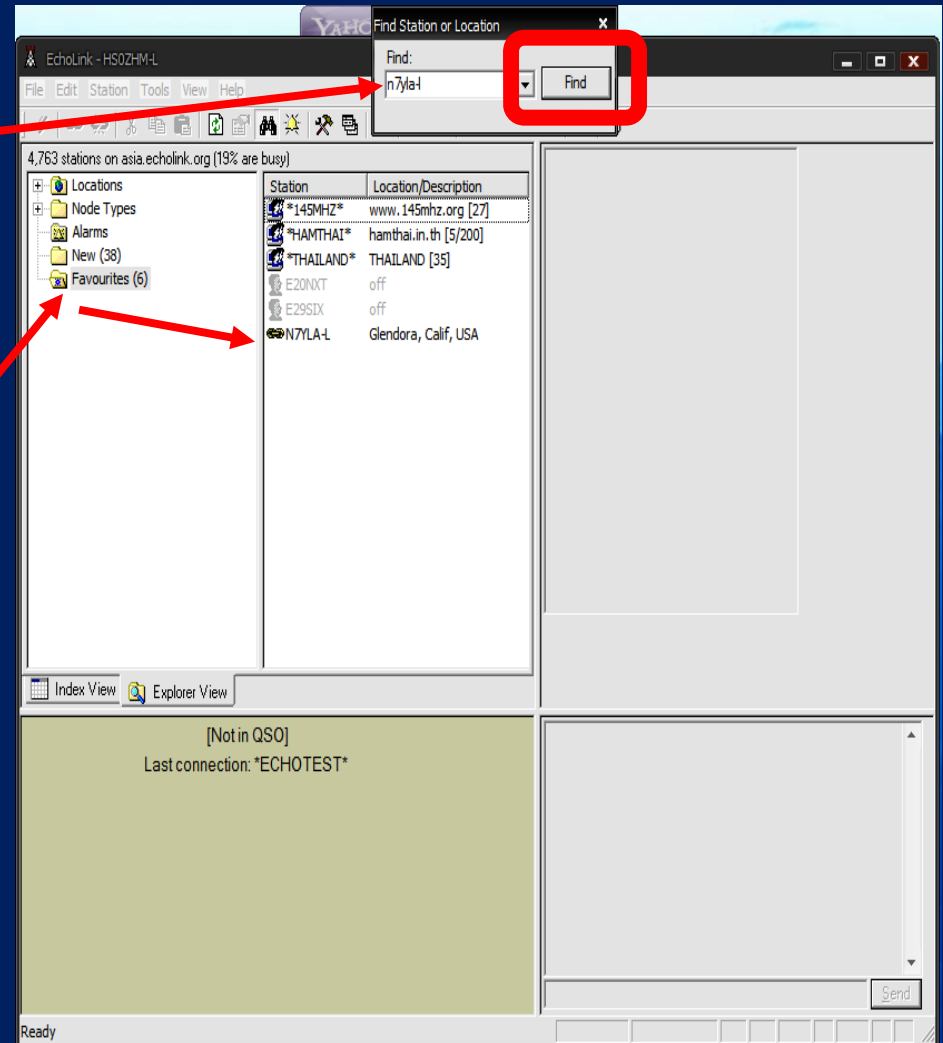
Point and click on the “Find” icon (the pair of binoculars)



Searching for N7YLA

Type in the call sign or
the node # of the station
you want: N7YLA-L
Then click on “Find”

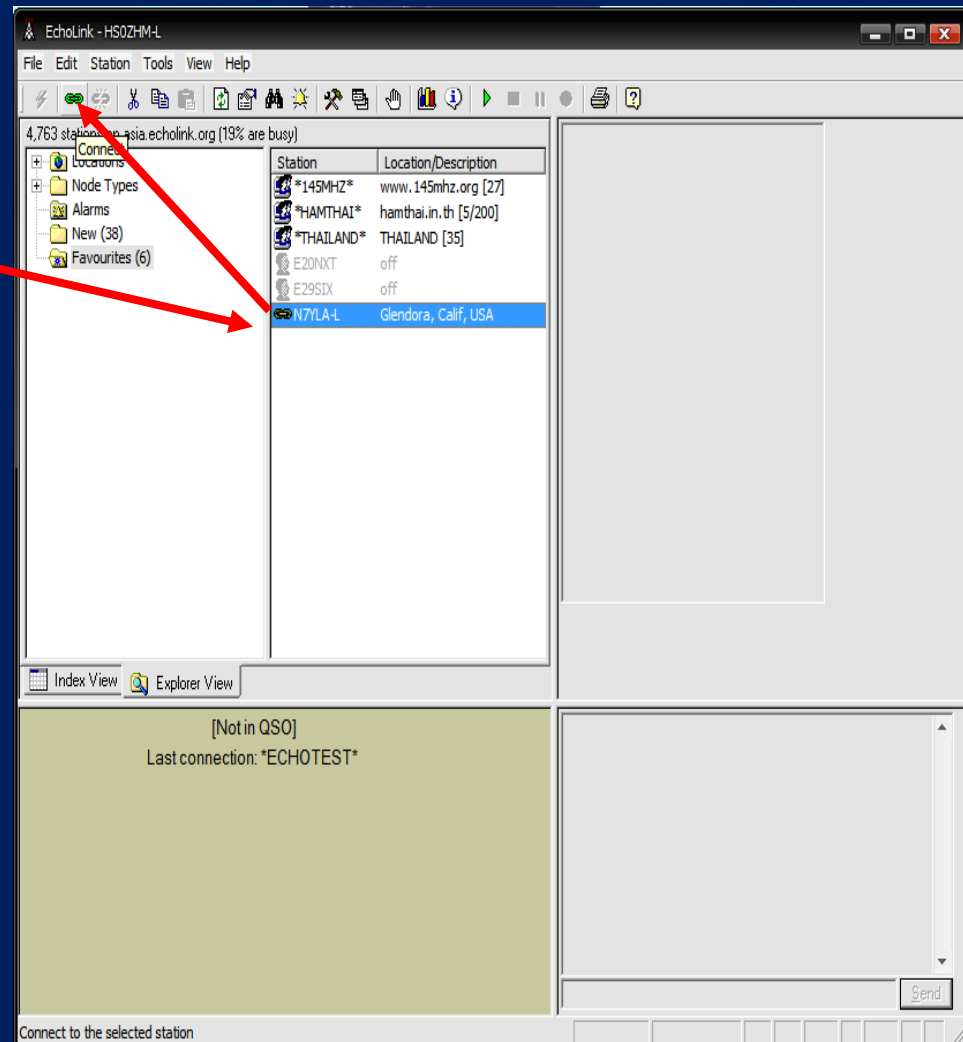
I put N7YLA in
my favorites to
make it easier to
find next time



Connecting to N7YLA-L

To connect,
select it, and
click on the
connection link
icon

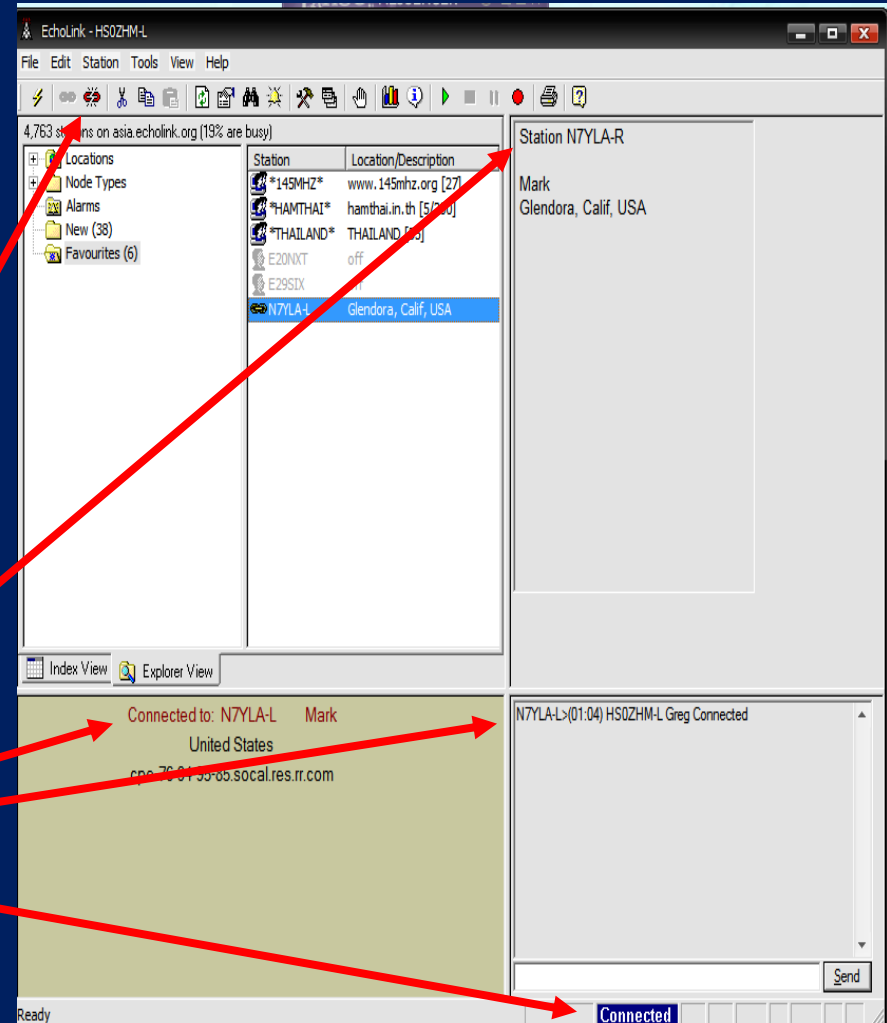
Or double click
on it



Connecting & confirming

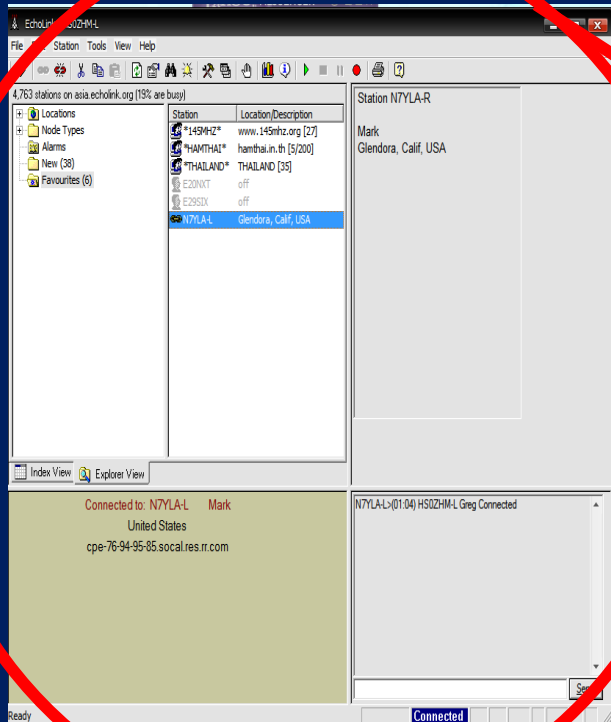
The system
will announce
“Connecting to
N7YLA”

Once
connected, the
system will
announce
“Connected”;
watch these
screen items



Net Control can see you log-in

This is Mark (N7YLA) the GERC Net Control Operator at his station. The EchoLink® computer and screen is to his right.



Once You are Connected

“Monitor” the “traffic” (listen to the transmissions).

Have paper and pencil handy and practice listening for the call signs and names once the roll call begins.



Even if you are shy and don't want to speak, practice listening to sharpen your hearing skills. In an emergency it will be very important to get a call sign accurately. You may only have one chance to get it; so be sure you get it right!



GERC Net Protocol

Glendora Emergency Response Communications

34.116508 N 117.854851 W DM14bc UTC -8 ITU 6 CQ 3

- 2015-2030 Net Control announces the GERC Net
- 2030 Net Control begins the Directed Net
- Net bulletins; call for bulletins from GERC members
- Roll call of GERC members from previous Net check-in
- Roll call of EchoLink® check-ins by order of EchoLink log-on to Node 358124
- Call for any late GERC check-ins or visitors
- Round table discussion in order of check-in
- Net concludes at end of the round table



For non-native English speakers, you may request the Net Control script by E-mailing Mark at n7yla@arrl.net

Bulletins, Roll Call, Round Table

- Bulletins are announcements of general interest to the group at large (usually of upcoming GERC activities)
- Roll Call: This is based on the order of names from last week's roll call.
- Round Table: Each person checked-in to the Net is called on (in order they checked-in) by Net Control. When you are called, you may address a question or comment to all or any specific members on the Net. At the end, you return control to Net Control.

Ending the Net

- Net Control will announce the closing of the Net and sign off.
- Each person will sign off with their call sign and
 - “clear” (meaning they are checking out and are no longer available to talk).
 - ”monitoring” or “standing by” if they will remain on the air for further contacts.



Some of the Regulars on the GERC Net



Richard
KG6TRD



Jim
KG6VBM



Jim
KG6TQT



Tom
KI6YCC



Frank
KG6TQV



Jim
KG6VBM



George
KC9TIJ



Dave
KJ6OOH



Dennis
KI6NQG



Rob
KE6YGF



Carolyn
KF6RFJ



Bruce
KJ6QCM



Greg
HS0ZHM

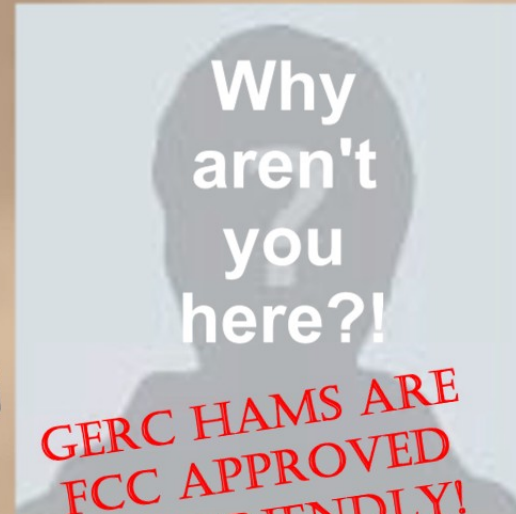
We
hope to
hear you
on the
GERC
Net
soon!



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HSØZHM
All rights reserved.

WANTED

Active GERC Net Participants



Now that you have a license
you can join the GERC Net.
Get on the air every Tues, 08:30 pm
(except 3rd Tues of the month)

via Echolink (node 358124)



It's better to network than to not work.

Community-based Environmental Education for



The End

www.neighborhoodlink.com/org/rtcth
rtc2k5@gmail.com