

SETTING UP THE BUX COMM “**RASCAL**” WITH ECHOLINK

First of all understand that echo-link “defaults” to the internal windows sound recorder.

If you go to **start/programs/accessories/entertainment/sound recorder** and bring up the recorder, your audio on echo link will be the same as the levels set in (soundcard software) the recorder.

You must have a soundcard that supports full duplex, or creative labs compatible.

Echo-link supports four (4) user modes;

1. *single user,*
2. *simplex link,*
3. *sysop chat,*
4. *and repeater modes.*

The settings (setup) that follow are based on the BUX COMM **RASCAL** in Link mode assigned to a frequency you have picked which is a full bridge from your PC to the frequency you have selected. Make sure you are in the correct bandwidth for experimental operations.

This setup was performed using an Icom 706MKIIG and a BUX COMM **RASCAL** mark V GLX.

My mode settings on my Icom are set to default; The exceptions are:

- **#7 rf/sql auto**
- **#29 1200 baud**
- **#30 vsend on.**

If you look in your owner’s manual on page 54 and section 30 you will find which mode should be in depending on the band you will be operating in.

As an example: I am on 145.540 simplex so my **vsend** is **ON**. If I were operating on the hf bands my **Hsend** would be **ON**. If you are using some other radio make, and/or model these settings will not apply, and may be different for your radio/application.

A little about the link setup; While running your link, and to access the link you will need another radio or HT nearby. I use an HT, this way you the operator will be able to talk to the *echolink* ham over your PC and to other hams on the frequency you are using, will be able to hear and talk via *echolink*. However the operators on your frequency will not be able to hear you because you are going into your own PC.

You are able to talk to them by picking up your 706 mic and talking into it as you would normally do. Understand that, when transmitting over your Icom 706, the *echolink* ham will not be able to hear you. This is how we have ours set up. However, If you are operating a second station (or mobile) to a different antenna, other *echolink* stations and operators on the same frequency, in your area, will be able to hear you.

INSTALLING AND SETUP OF ECHO-LINK

Install the echo link software.

You can install echolink from a number of web sites. One of the sites we found is <http://www.echolink.org/>.

There are numerous pages for (FAQ) questions and answers, before and after you have your **RASCAL** set up. On the echolink website there is support and frequent asked questions (FAQ) tab. That almost always answer any problems you may have. Here are a few other web sites may be of interest.

<http://www.qsl.net/nparc/EchoLinkSysOp.htm>

<http://groups.yahoo.com/group/echolink/>

Let's get started, and remember, this won't be difficult at all.... from experience, I speak.. so you can start having fun!

Select; **tools**, **setup**, and **my station**; Under mode, select **sysop mode** and under **call sign**, enter your call sign with a **-L**. Under **location** is what will appear on echo link, if you want your link listed as a **freq** this is where you do it. See figure 1.

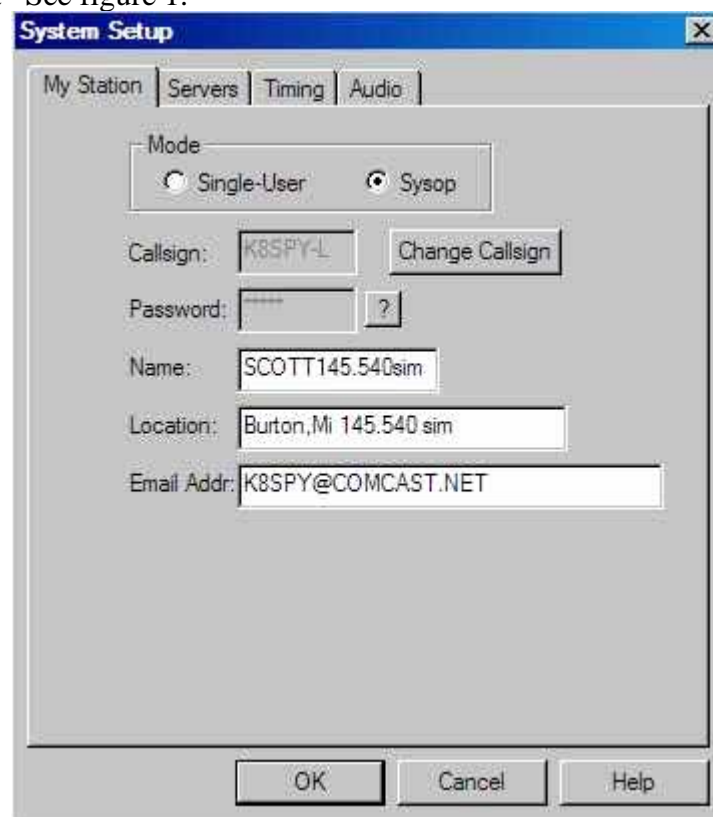


Figure 1

Under the **servers** tab, leave at default and **retry timeout** set to **10 seconds**.

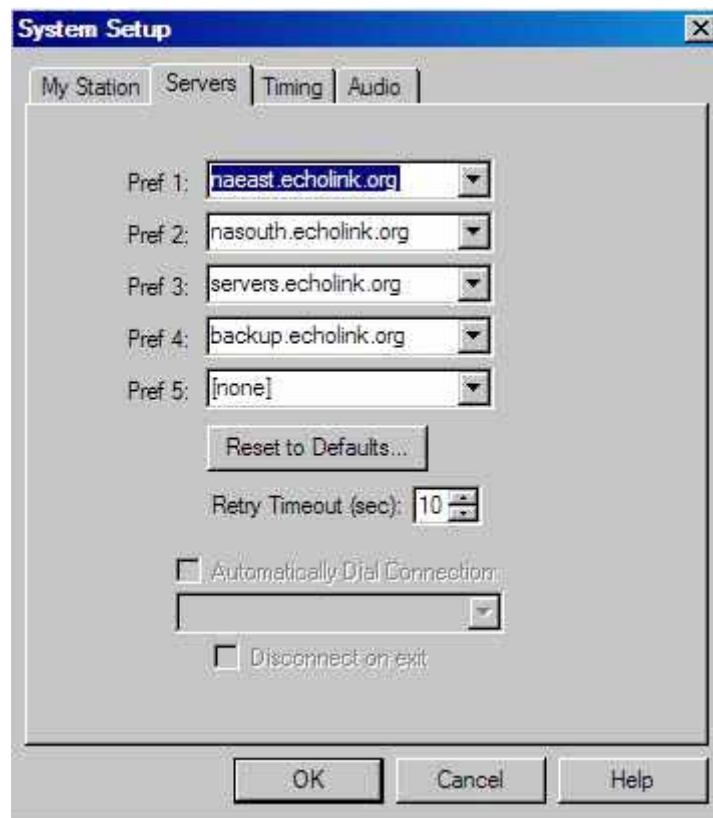


Figure 2

Under *timing connect attempt* is 30, *transmit time*, *receive time*, and *inactivity time*, all set to 0 (zero). This is because as far as echo link is concerned there is no limit when set to 0...**WE found this out the hard way.**

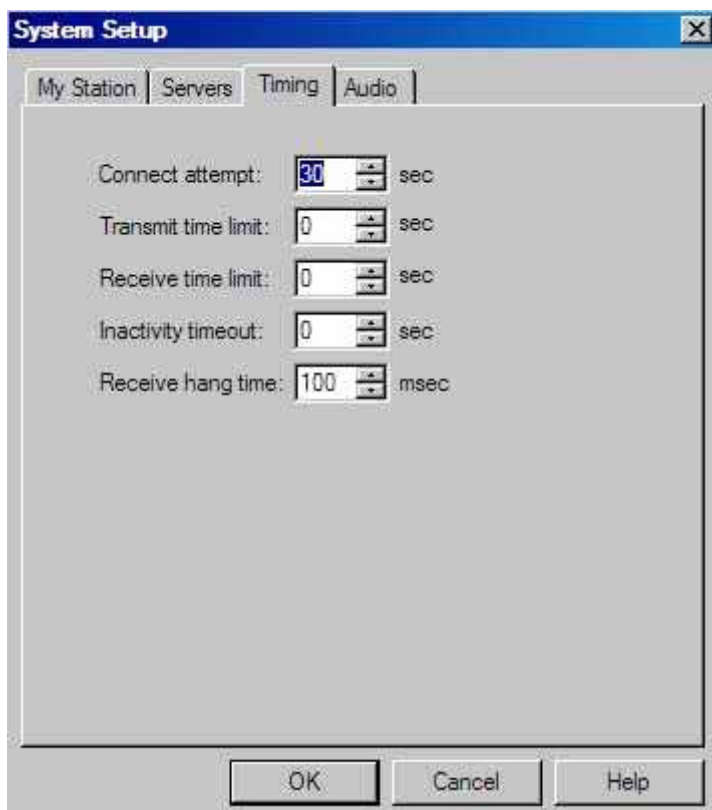


Figure 3

Receive hang time should be set to **100 msec**.

Under the *audio* tab for the input and output device make sure your soundcard appears in both windows.



Figure 4

Open in *full duplex* is checked, *auto sample rate* checked, *300 kHz high pass filter* checked. *Recording mode* is your preference. Set the network buffer to 8 and the PC buffer to 5.

This concludes the setup.

TOOLS PREFERENCES SETUP:

Under the *list* tab, you may set this to your preference, but do not check the ***alarmed only*** or you and other opps will hear the alarm when another station connects.

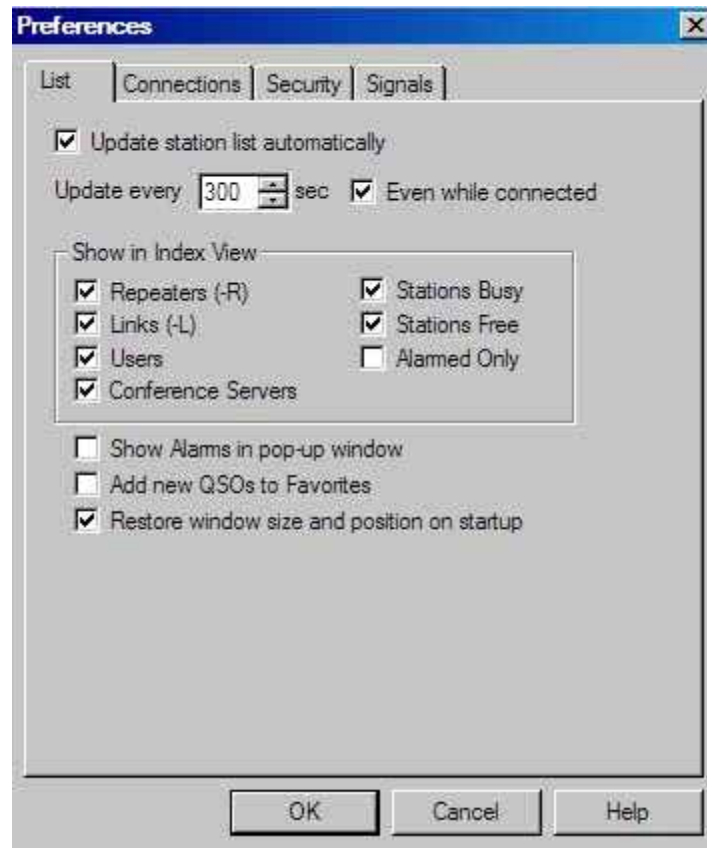


Figure 5

Under ***connections***, it gets a little trickier. ***Allow conferences*** depends on your connectivity speed to the Internet; with high speed, use 20 as your default (on DSL), for cable modem, use 8 as a default, and if you're on a *dialup* connection you should limit connectivity speed to 4 max.

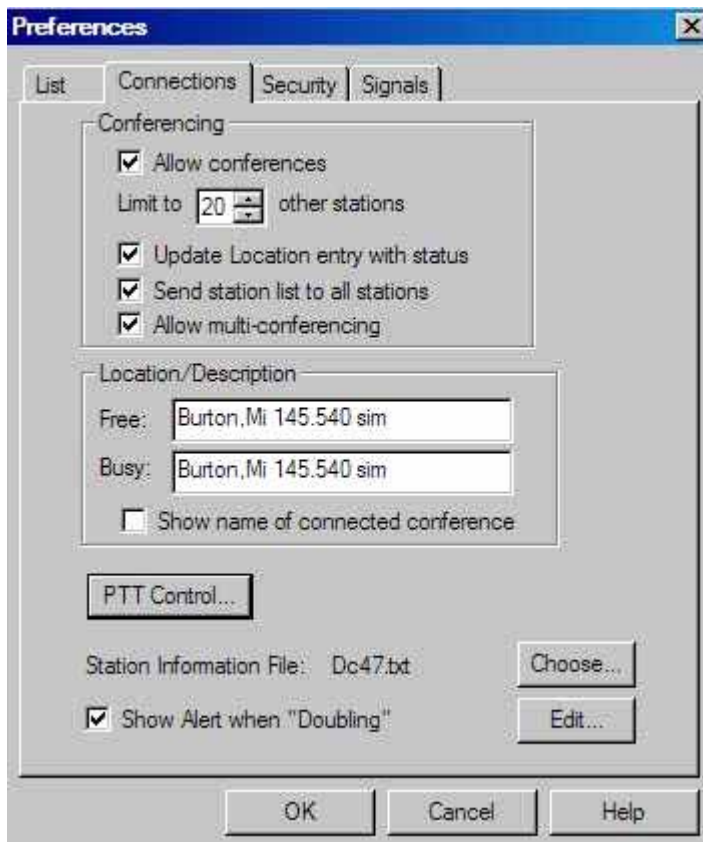


Figure 6

Show alert when doubling, should be checked. Here, PLEASE NOTE.... **PTT control** is very important. Set it to COM 1 (*or the serial port in use*), and set *auto select mic input*. *Security tab* is self-explanatory. *Signals tab* will not be an option as we are in the sysop mode.

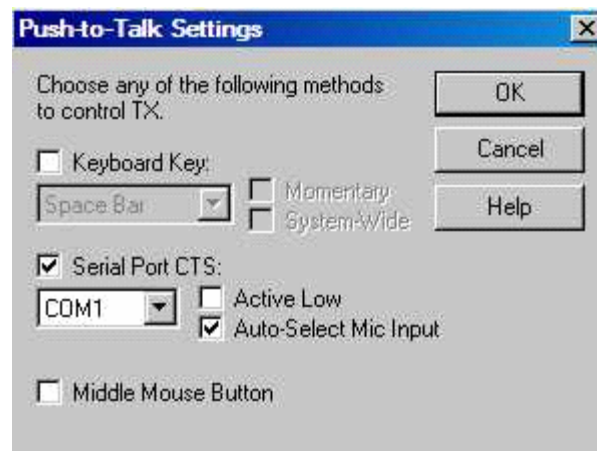


Figure 7

TOOLS SYSOP SETTINGS:

Rx control should be set to VOX, *vox delay 600 ms*, *anti thump 500 ms*, *clear freq delay 500 ms*, *squelch anti trip 50 ms*.

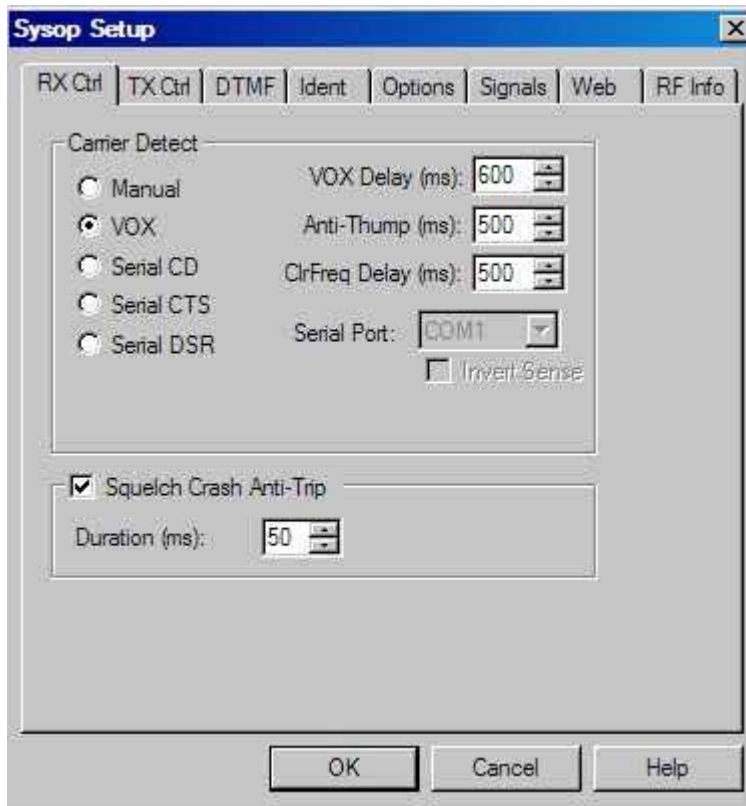


Figure 8

TX control is set to DTR, COM port in use (#) and *DO NOT CHECK 9600 BPS*. **Key PTT on local xmit MUST be checked.**

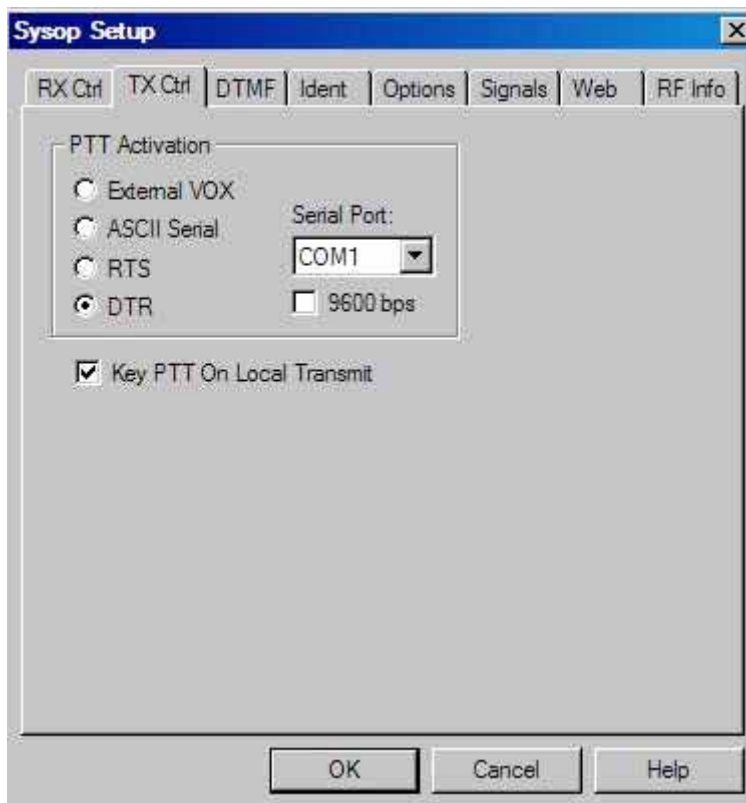


Figure 9

DTMF decoder check “*external*,” box; CHECK also auto mute, no other box is checked under this tab.

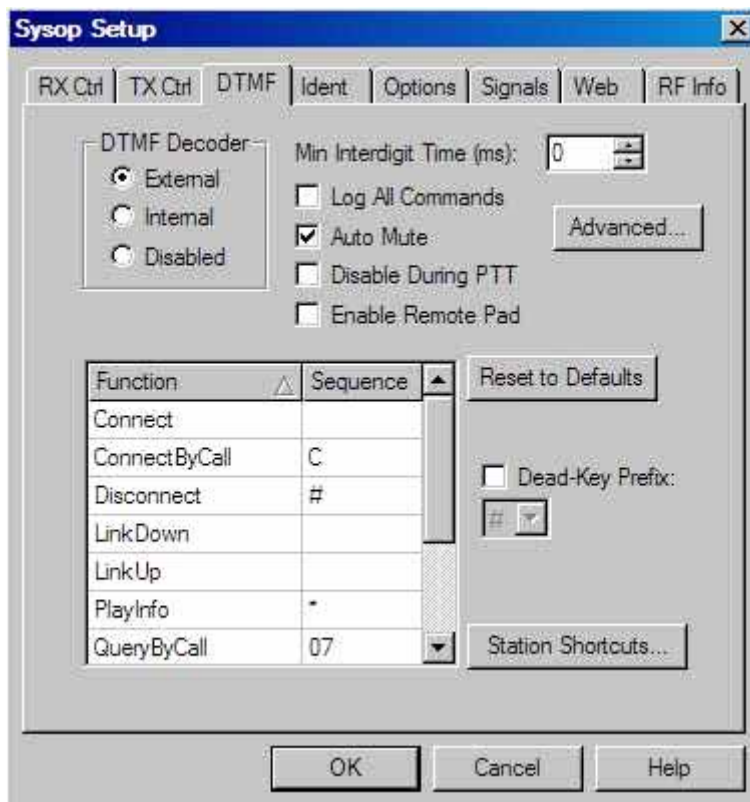


Figure 10

Ident tab is a personal choice we use Morse at 20 wpm with a setting of pitch of 567 and a level of -2.6 db. Or you can set it to spoken voice. If you have a wav file on your PC of yourself identifying call sign and location you can check external file.

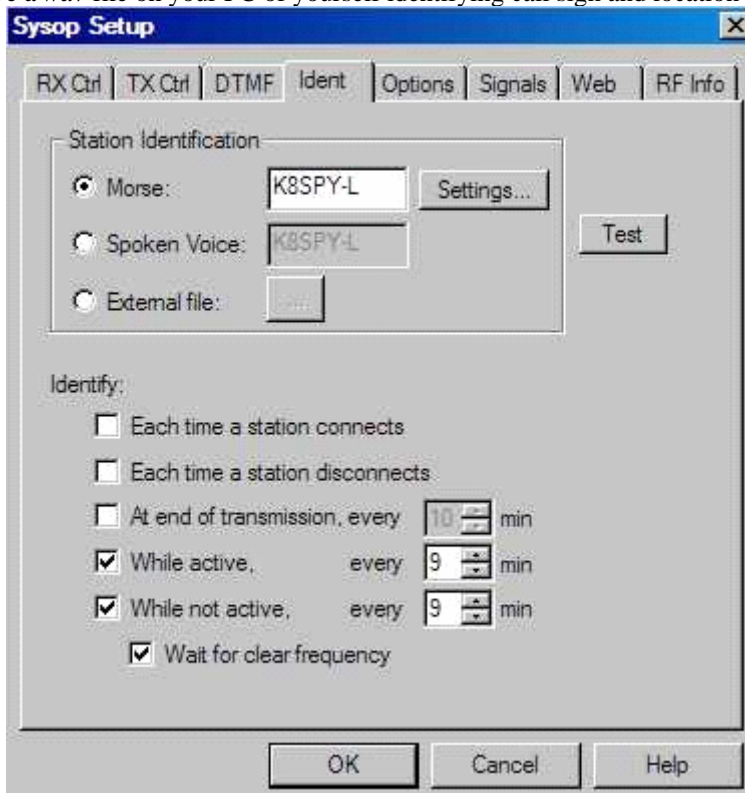


Figure 11

Under the options tab announce all connects and disconnects is checked merely a sysop preference. Key down time and dead carrier under this tab should be set to 0. Signals tab should be default and send tone burst *never*. And *announcement pre delay* at 250.

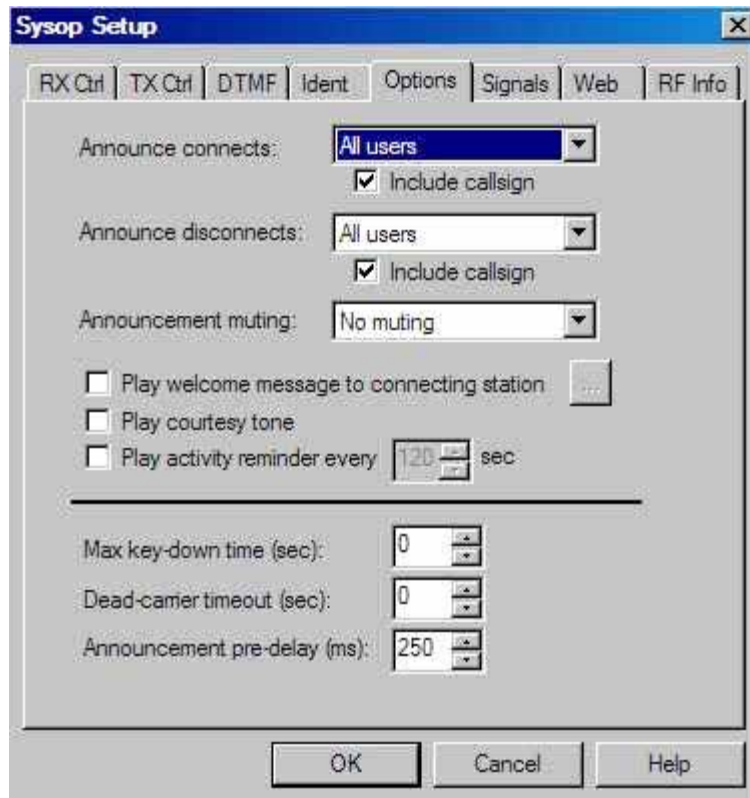


Figure 12

Web and RF info is sysop preference.

FINAL ADJUSTMENTS & TOUCH-UPS:

Double click the spkr in the lower right hand corner of the computer. Click options and the properties. In playback volume, wave, and line should be checked and in record, mic and line should be checked.

Go to the echo test server and set your levels keeping in mind that the yellow area is an overdriven situation in echo link. When completed and you are on frequency, have a few operators out there to listen to your audio. If you need to turn it up (or down), *try the windows wave slider first*, if you cannot get anymore audio, inside your new **RASCAL** GLX there is a small turn (variable) pot, this is the transmit audio level control. Turning it to the right (clockwise) will increase the transmit audio, hence to the left (counter clockwise) will turn it down if you have too much (over-diviation) audio.

This instruction and setup manual was written around the use of and Icom 706MKIIG. The same setup should perform the same using most other similar transceiver, using the BUX COMM **RASCAL** mark 5, including the new GLX.

You are now setup for an RF gateway link with the **BUXCOMM RASCAL**. If you have additional notes and comments, please forward to: K4ABT@PacketRadio.com For more info about the **BUXCOMM RASCAL**, Go To: www.PacketRadio.com/rascalmkv.htm or to: www.BUXCOMM.com

Have Fun with your BUX COMM **RASCAL**, es best 73 de **Buck Rogers K4ABT**

Our thanks to our BUX COMM Beta testers; *Scott K8SPY, and Criss W8CH* in the preparation of these instructions