

## WIRES-X Information

### Wires-X is on the WRØMG Repeater!

This is basically a user guide for the analog FM user. If you have one of the Yaesu Digital Radios please make sure it is in standard FM. This Wires-X unit is setup to accept DTMF codes only. This may change latter as we learn more about the System.

**PLEASE** familiarize yourself with some of the operating procedures on WIRES-X. It is **VERY IMPORTANT** to know how the system works and how to interface with it. This is a new system to most people, and we are all learning about it together. Don't be surprised to find that your first WIRES-X contact is with someone who is also making their first contact as well!

Plan to spend plenty of time reading and educating yourself on the WIRES-X System **PRIOR** to operating on it. Here are a few pages to familiarize yourself with. Read them, and if you have questions, please feel free to contact us.

**PROPER** use of the WIRES-X System is **REQUIRED** for the system to operate as it should.

## **"What Is Wires-X?"**

**Wide-Coverage Internet Repeater Enhancement System, is an Internet communication system which expands the range of amateur radio communication. For WIRES-X operation, an amateur node station connecting to the Internet is used as an access point connecting your wireless communication to the Internet. Your station can communicate with other amateur stations all over the world using a node within your radios range.**

**The WRØMG Repeater is linked to this system, allowing world-wide contacts to be made over the Clubs 70cm repeater.**

*"Will I have to buy a new radio?" NO!*

**Analog users (the majority of us) can still access the system, however some of the more advanced features will not be available to analog users.**

*"Can I turn the Wires-X System On/Off when I want to?" Yes!*

**Pressing your PTT (Push-To-Talk) and pressing \* on your DTMF keypad will disconnect the WRØMG Repeater from the Wires-X system (for about 20 seconds).**

*"Who all can hear me?" You decide!*

**When a user connects to a "room", the room may be full of other users, or only a few. Some might be in the USA, others could be overseas! By default, we reside in our own "Room", which may or may not have other users in it. Keep reading for more on this.**

*"Is this like IRLP or Echolink?" Somewhat.*

**With Wires-X, a node such as ours at the Club, connects to a room, which might already be hosting other nodes. This feature is not available with IRLP or Echolink. Wires-X (a Yaesu system) allows "Rooms" that often host several other nodes (like ours), some of which might be repeaters or personal nodes, belonging to a single operator. Keep reading...**

*"Do I need to upgrade my license to use Wires-X?" No!*

**A Technician class operator can access the system and still make contacts with other states, and countries. A license upgrade is NOT required to use Wires-X. The Club does encourage users to continue their self-education and consider reaching out for upgraded license privileges.**

**"What if I need the repeater for an emergency?" Easy**

**Use the repeater as normal as stations locally can still hear you on our repeater. Or, chose to disconnect the system first, from the WIRES-X system. Either way, your emergency traffic WILL be heard locally, and possible on other systems as well if we are still connected. Pressing your PTT, then \* , will quickly disconnect, or hang-up on the system. NOTE, this can only be done (right now) in-between transmissions.**

## **"How Does It Work?"**

**It's actually simpler than you may think. Much of the following will become clearer once you start using the system.**

**A Yaesu radio with a DATA jack on the rear, connects to a Yaesu HRI-200 Wires-X unit called an HRI-200. Then the HRI-200 connects to a personal computer with internet access. Software titled "Wires-X" tells the HRI-200 what to do. Also a user with a radio can also tell the Wires-X Box what to do, using DTMF tones on their keypad. Read on for the commands you can use to tell the system what to do!**

**The Wires-X HRI-200 Box is also called a "NODE". This NODE is accessible over the internet using VOIP (Voice Over Internet Protocol). Basically, the audio that the radio hears, is sent to the X-Box, and then to the internet wherever it is directed to go (usually a room). A NODE might be a simplex node somewhere, or even a repeater. So a repeater node, although listed as just 1 node in the room, might actually be a repeater, with an audience of hundreds. This repeater might even be linked to other systems as well.**

**Our room is virtually limitless, and can host as few as 1 other node, or even hundreds! The WRØMG repeater has a ROOM number as well. Ours is #43407. The difference between a NODE number and a ROOM number is the very first number.**

**A user coming into the Wires-X system will be on the WRØMG repeater room #43407. The repeaters call sign (WRØMG) will be displayed in the software and on the screen of other users. *YOUR CALL SIGN WILL NOT*. If you have a Yaesu digital radio, it will display on the other side. However this is one of the more advanced features of the system that only Digital users will have access to.**

When you are in a room, and key your radio, the WRØMG call sign WRØMG is displayed on other stations radios. Not to worry, simply identify your station and advise your contact that you are coming in thru the WRØMG Repeater.

## **"How Can I Use It"?**

### **SIMPLY FOLLOW THESE 4 STEPS**

**1 Listen!**

**2 Listen!**

**3 Listen!**

**4 .....Ok, this step has several steps. Did you happen to notice steps 1 - 3? Yes! Listen, Listen, Listen! This is the best advise we can offer you. Please KNOW what you are doing BEFORE you do it. The more prepared you are, the more receptive other stations will be to engage in a QSO with you.**

**Our Repeater (NODE #33407) is connected to our own room #43407. Our own room accepts call from outside stations as well. If you desire a different room, simply key your radio and send the DTMF character \* into the repeater. Once you DISCONNECT (\*) from our own room, or whatever room we are currently in, you will hear the repeater "talk back" to you with 4 rapid dits. This is a MORSE CODE "H" (for hangup) and is the indicator that you have just disconnected from a room. Within about 20 seconds, key into the repeater (with your PTT button) the # sign followed by the room number of your choice, and un-key your radio. Once again the repeater will "talk back" to you and announce that it is connected to the room you requested. If you do not receive an announcement that you are connected, a series of 5 long tones will be heard. This indicates that the room is either busy or is not accepting incoming connections. Once you receive the announcement that you are connected, PLEASE wait to transmit, to ensure that there is not already a QSO in progress.**

**There is a list of available rooms on the internet. Simply look up the list of available rooms currently on the system. Click the button in the below listed graphic to view the list of nodes and their room number. Remember the number of the room you would like to join. The WRØMG repeater is a DR1-X System Fusion repeater, the receiver is set to AMS Mode but the transmitter is set to FM analog mode. This way the standard FM user can share a QSO with a digital user on the Wires-X system. The conversion to digital mode is done inside the Wires-X box. Some rooms do not want analog nodes (like ours) to connect to them. Please pay attention to the comment section of the list, and respect those who ask that no analog repeaters (or RF linked repeaters) connect to their room.**

# Wires-X ID List

The repeater may already be connected to a room and someone might already be in a conversation. So... Listen, Listen, Listen, to make sure the repeater is NOT in a room already, and that a QSO is not in progress. Better yet, after listening for a few moments, announce "is the repeater or Wires X in use"? Once you are confident that you are not interrupting a station or a QSO, key the \* symbol into the repeater. This is also known as "hang-up" or "Disconnect", which will disconnect the repeater from any Wires-X room it's in. The repeater will answer this with 4 rapid dits (Morse code "H" for hang-up), indicating it has disconnected.

Now that you have your desired room, send the DTMF character #, PLUS the desired room number into the repeater using your PTT by pressing # followed by the 5 digit room number you desire. The repeater will either announce to you it has connected, or that the connection has failed, using a series of 5 rapid tones.

You have just connected to your very first room! Congratulations! VERY IMPORTANT - When entering a room, a QSO might already be in progress, so follow steps 1, 2 and 3 again. Better yet, follow them a second time. No one wants to be interrupted by someone barging into a room hollering their call sign. Once connected, either (1) Listen for other stations, (2) Respond to a calling station, or (3) Put out your call sign with the state (Washington or Oregon) that you are calling from, and simply ask for a Wires-X contact. You will likely get a response using this method. The room you are in likely has several repeaters in it, so make sure to follow the rules and be mindful that your transmission might be carried by dozens of repeaters systems in the USA and OVERSEAS.

Use your call sign Phonetically! Phonetics help immensely with stations being able to hear your call sign and respond to you!

When you are in a room and establish a contact, it is VERY IMPORTANT that you not "Tailgate" or "Quick-Key". Once the other station is done transmitting, count to 3 or 4, and then begin your transmission. When you start your own transmission, please key up, wait a second or two, and THEN begin speaking. Remember, you are likely bringing up several (sometimes up to 100!) connected repeaters, and they like a little time to start transmitting before you start talking. This allows the entire system to complete the previous step before picking up your transmission. Once you are done speaking, leave your mic keyed for about 1 second (dead air), and *then* UN-

key. This encourages the station on the other end to do the same, keeping the system flowing smoothly. Please review these points to present yourself as a well prepared station.

When you are done with the Wires-X system, feel free to stay connected, in case another station wants to get begin a QSO themselves. This is called "leaving the link up", or "keeping it connected". If you disconnect, (dropping the link), that's fine as well. Just be sure to use your call sign, when you key the repeater to connect (#) or disconnect (\*).

**ALWAYS IDENTIFY** your transmission, when connecting or disconnecting the Wires-X link.

Here is something else to listen for. Our repeater will disconnect from the room or node after 15 minutes, this is normal. Once you disconnect from a room, any room, our node will "park" itself back in the WRØMG room after about 15 - 20 seconds. If you do not key a new room into the system, our node will put itself back in our own room automatically. Feel free to test this out yourself. Disconnect from the current room, and then wait and listen. it will go back to its own room about 15 - 20 seconds later. The WRØMG repeater is ALWAYS in a room, even if it is our own.

Here are 2 *perfectly* acceptable examples...

*"This is NUØB, accessing WIRES-X"*, (assuming that you have already disconnected previously) and then *without un-keying*, key your desired DTMF characters into your radio. Now UN-KEY.

The same is true when disconnecting...

Key up and announce *"This is NUØB (better yet, use YOUR call-sign), dropping (or) disconnecting WIRES-X"*, and then *without un-keying* your radio, key \* (star) into the repeater.

Now UN-KEY your own radio. You will hear the repeater return with the disconnect message.

A good portion of the above listed information was provided by the

Spout Springs Repeater Association: [www.wf7s.net](http://www.wf7s.net)

Thanks Guys

Ken - NUØB