Hamilton Amateur Radio Club

How to use AllStarLink on the

VE3NCF Repeater System

Document Version History

Version	Changes
1.0	Initial Document
1.1	Removed DMR node (it wasn't used).
	Updated the Echolink connection to the VHF Node/repeater.

What Is AllStarLink?

AllStarLink (ASL for short) is a world wide network of Amateur Radio repeaters, remote base stations, and hot spots accessible to each other via the Internet. ASL is based on the open source Asterisk PBX system and is released under the GNU GPL and is free for anyone to use.

Accessing the ASL system via the VE3NCF repeater does not require any special hardware or software for ham operators. The system can be accessed via your VHF or UHF handheld. Controlling the repeater system (to connect to other nodes, for example) requires a radio capable of transmitting DTMF tones.

What Is a Node?

A "node" on the ASL system is an end point that is typically accessible throughout the world. This endpoint could be a repeater system, a digital gateway or a personal hotspot. Any number of nodes can connect to a node, forming a hub. This allows as many systems as imaginable to be connected. Typically, all traffic is broadcasted to all the connected nodes allowing you to contact people throughout the world.

VE3NCF Nodes

The Hamilton Amateur Radio Club has installed three nodes. One node is connected to the VHF Repeater (146.760 -) and the other is connected to the UFH Repeater (444.075 +). The third node is a virtual node that doesn't broadcast on any radio. This node can be used for testing or having connections that do not broadcast on the air. The node numbers for the nodes are as follows:

> VE3NCF VHF 146.760 Repeater – Node 597980
> VE3NCF UHF 444.075 Repeater – Node 597981
> VE3NCF Hub (radioless node) – Node 597982

Finding Nodes

ASL nodes can be found throughout the world. If you are in a majorly populated area, chances are there is a node nearby. A map of all registered nodes is available here:

http://stats.allstarlink.org/maps/allstarUSAMap.html

A list of all registered nodes is available here:

https://www.allstarlink.org/nodelist/

ASL Standard Commands

Once you know the node you want to connect to, its time to make the connection.

ASL Commands have been standardized across all systems (unless a system operator has, going against recommendations, changed their commands).

Here are the standard commands to operate any ASL system:

*1 `node` - Disconnect Link
(disconnects a specific node from the system)

*2 `node` - Connect link in monitor mode
(the node you are connected to will hear your transmissions made on the system you are talking to, for monitoring only)

*3 `node` - Connect link in transcieve mode
(the node you are connected to will hear all transmissions from the system you are talking to)

*4 `node` - Enter command mode on a remote node (See Note 4)

*70 - Local connection status (lets you know who is connected to the system)

Notes:

1. `node` is an Allstar Link node number
2. Node number zero (0) can be used as shorthand for the last node operated on by a previous command
3. Monitor mode means listen to a node, but do not send any audio to it
4. Command mode means send all received DTMF digits to the node number specified (bypassing the local command decoder). Send # to exit command mode, and restore local command decoding when complete.

HARC Custom Commands

A few custom commands have been entered into our system to quickly complete tasks. Here is a list:

*73 – Disconnect all connected nodes from the repeater system
*55 – Plays the AARL Amateur Radio Newsline on demand
*56 – Plays the AR Amateur Radio Newsline on demand (VHF Repeater / Node Only)

Echolink

The HARC VHF AllStarLink node (597980) also has the ability to connect and interface with Echolink nodes.

To "connect" an Echolink node, connect like any regular ASL node but using a special dialing method. First, you need to start by adding a 3 at the beginning of node number. Second, you need to make sure the Echolink node number is padded to 6 digits by adding 0s to the beginning. This will make the node number 7 digits long, always starting with a 3.

Here are some examples. Say you wanted to connect to Echolink node 1234. The ASL command to do that would be:

*3 3001234

So above, *3 tells ASL to connect to a node in transceive mode 3001234 would be Echolink node 1234

For a second example, to connect to Echolink node 567890, here is the command:

*3 3567890

The VE3NCF-R (repeater) echolink node number is 349674

To connect to our node from another ASL Node (that has Echolink setup), the command would be:

*3 3349674

ASL Monitoring Dashboard

A monitoring dashboard has been put in place to allow club members to see repeater status at any given time. To access the dashboard, simply visit:

https://repeater.hamiltonarc.com

Mobile Phone / Computer Access

Access to the ASL network can also be made via mobile phone. The process for this is simple.

First, you need to create an ASL account. Visit the AllStarLink website (https://www.allstarlink.org/) and lick Login/Sign Up. On the popup, click the Sign Up button and begin the registration process.

Once you have an account, there is no need to setup a server or node. Your account is all you need.

Next step is to install software on your device to access the network. Below is some commonly used software for various platforms. There may be other apps available, and this is not to be taken as an endorsement on how well these apps function.

iPhone/iPad:

RepeaterPhone
https://apps.apple.com/us/app/repeaterphone/id1637247024

Apple macOS:

Transceive

https://apps.apple.com/us/app/transceive/id1529395199

Android Phone (Samsung, etc):

DVSwitch Mobile

https://play.google.com/store/apps/details?id=org.dvswitch&hl=en_CA

Windows:

No easy or currently supported version known. This may change in the future.

Once you have your software setup, you want to configure it for WT or Web Transceiver access. You will use your login credentials you created earlier. Enter these in your application. Once setup, you can connect to any node of your choosing (our node numbers are listed earlier in this document). You can now interact with repeaters (or other nodes) just as you would over radio frequency links.