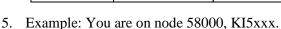# Ham 47B – ASL User: Ops with DTMF
Dr. Marc & Rosemary 230117

1. Why AllStarLink? The system uses analog RF to a duplex repeater / simplex radio, which connects through a sound card interface to a Raspberry Pi on the internet. The digital side uses AllStarLink PBX protocol to connect and control other radios and computers using a DTMF keypad.
   a. AllStarLink connects RF systems.

2. With AllStarLink, your signal is on a radio & computer. If linked, you are on remote repeaters. Listen before connecting. On your radio, key the mic and transmit your ID. While keyed, send the tones. Wait a couple of seconds for the network exchange. Listen for tones when things change.

3. You need the node (phone) number for connection and control.
   - AllStar node numbers: http://stats.allstarlink.org/ .
   - Evergreen: KI5UNR-R, 584801

4. Common DTMF codes are listed with optional system commands.

DTMF	Commands	DTMF	System Commands
*1 [node]	Unlink specific node	*712	Give time local
*2 [node]	Connect to node, receive only	*721	Force system ID global
*3 [node]	Connect to node, transceive	*806	Disconnect all links
*70 [node]	System status, local connections	*807	Last node to key up
*76	Disconnect all links	*815	Global connections status
*99	Assert PTT from phone	*816	Reconnect all disconnected

5. Example: You are on node 58000, KI5xxx.
   - You wish to link to Evergreen node 584801. Connect only with approval of both system operators.
   - Key up, say your callsign, and enter: *3 584801.
   - If the node doesn't speak an error, you are connected. Evergreen & your link are one.
   - Give your ID again, and make your call just like on a radio or announce you are listening if you want to chat.

6. Example: You are on a radio through the simplex link, 58000.
   - You wish to see what is linked through Evergreen repeater 584801
   - Key up, say your callsign, and enter *815 584801.
   - The node will read back everything connected.

7. Example: You are on a radio through simplex link, 58000.
   - You wish to connect to remote hub node 584801, but do not want to interfere with activity.
   - Key up, say your callsign, and enter *2 584801, for receive only.
   - Transmission on simplex link will not go to remote hub.
   - Activity on remote hub will be heard on simplex link.

8. Example: You are in receive only, but wish to initiate transceiver to talk.
   - Key up, say your callsign, and enter *3 584801.
   - You are connected. Give your callsign again, you are on the radio.

> *Key Up:*
>   Wait for xmit about 2 secs.
> *Finish Talking or DTMF:*
>   Wait to release key about 1 sec.
> The radio, computer, and internet take time to process.

9. Life is good. Enjoy!

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