Ham 92A - ASV User - Ops with DTMF
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1. Why AllStarVoip? 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 Asterisk PBX protocol to connect and control other radios and computers using a DTMF keypad.
   - AllStarVoip connects RF systems.

2. With AllStarVoip, your signal is on a radio & computer. If linked, you are on remote repeaters.
   a. Listen before connecting. On your radio, key the mic and transmit your ID. While keyed, send the tones.
   b. 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.
   - AllStarLink node numbers: http://stats.allstarlink.org/ . Use Ham 90D to keep track of all the passwords
   - Evergreen: KI5UNR-R, 584801

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

DTMF	Commands	DTMF	System Commands	DTMF	System Commands
*1 [node]	Disconnect from link number	*73	Connect permanent, transceive	*980	AllStar version
*10	Disconnect from last connect	*75	Full system status	*A1	Say local IP address
*2 [node]	Connect to node, monitor only	*76	Disconnect all links	*A3	Say public IP address
*3 [node]	Connect to node, transceive	*77	Reconnect just disconnected	*A5	Say registration status
*51	Play macro (Time & ID)	*80	System info	*A9	One time parrot on release PTT
*70	System status	*81	Time – 12 hr	*B6	Restart Asterisk
*71[node]	Disconnect permanent link	*82	Time – 24 hr	*D1	
*72[node]	Connect permanent, monitor	*83	Full link status	*D2	

5. Example: You are on node 58000, KI5xxx.
   - You wish to link to Evergreen node 584801. Connect only with approval of both system operators.
   - Listen. 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
   - Listen. Key up, say your callsign, and enter *75 584801.
   - The node will read back everything connected.

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

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.
   - Listen. 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.
   - Listen. Key up, say your callsign, and enter *3 584801.
   - You are connected. Give your callsign again, you are on the radio.

9. NOTE: Two nodes on the same router cannot communicate.

10. Life is good. Enjoy!

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