ALLSTARLINK ON THE W7SCS REPEATER
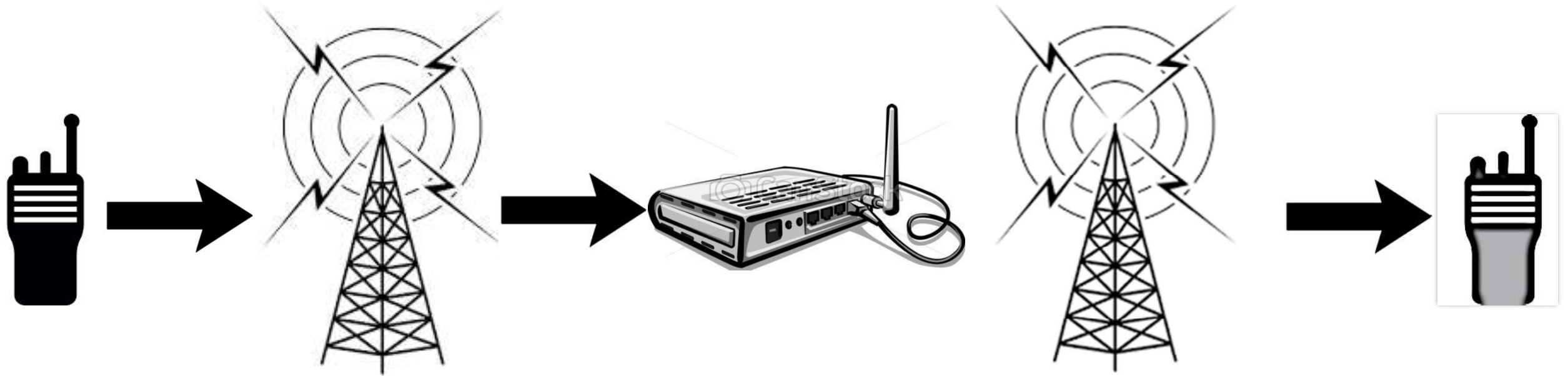
Connected to the World!

NODE

An AllStarLink node was built for us by Earl, WB6AMT. The approximate cost was $250 because this serves as a controller for W7SCS locally as well as a node for connecting to other radios. All nodes are based on the Raspberry Pi.

You can get a smaller node for yourself from Earl or others who build them:

Radio nodes (Built-in Transceiver in VHF or UHF)

Radioless nodes (A box with a microphone – no radio)

WHAT IT IS...

VOIP Linking of Radios using Asterisk PBX

WHAT CAN IT DO?

AllStarLink is a Voice-Over-Internet-Protocol (VOIP) that allows amateur radio operators to link and unlink repeaters, radios & radioless modules together into a network.

As the controller, you have the responsibility to connect and disconnect the links when you are finished. It's easy to do but can easily leave things a bit messy if the connections aren't disconnected at the end.

Connections can be "Daisy-Chained" – multiple connections can build on each other. "A" can connect to "B" and also to "C" while "D" can connect to any of those nodes and be on all four stations.

DTMF TONES:

DTMF Codes are your main method of controlling the AllStarLink node at our repeater location. On most radios you must push and hold the transmit button while entering all of your codes. Some radios don't require a constant transmit button but you will need to find out the specifics of your device.
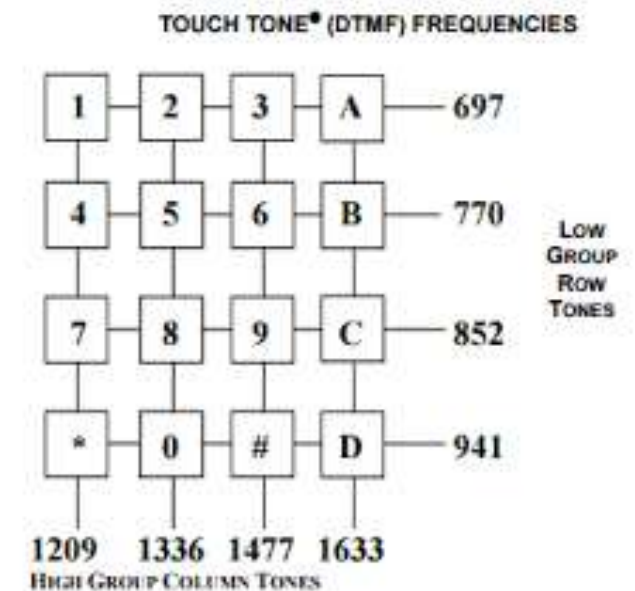
DTMF stands for "Dual Tone Multi-Frequency" and was developed by the Bell System for use as "TouchTone" dialing. Our radios have 4 additional buttons: "A","B", "C", & "D".

DTMF TONES – DETAILS:

Each button consists of two tones, generated to comply with this grid.
The DTMF decoder can determine the matching number by deciphering
the tones that it hears.

Your radio should have a function to generate the "ABCD" tones, even if
it does not have dedicated buttons. Check the user manual for details.

All AllStarLink operator commands begin with "*"

TOUCH TONE® (DTMF) FREQUENCIES

1	2	3	A	697
4	5	6	B	770
7	8	9	C	852
*	0	#	D	941

LOW GROUP ROW TONES

1209 1336 1477 1633
HIGH GROUP COLUMN TONES

LINKING ON ALLSTARLINK

*1xxxxxx (Disconnect from xxxxxx)

*10 (Disconnect last station connected)

*2xxxxxx (Monitor but don't transmit on xxxxxx)

*3xxxxxx (Link to node xxxxxx – Transmit & Receive)

Henderson ARC is "44045"

*344045 – Connects to the HARC Hub, making us a satellite of their system

*144045 – Disconnects from the HARC Hub

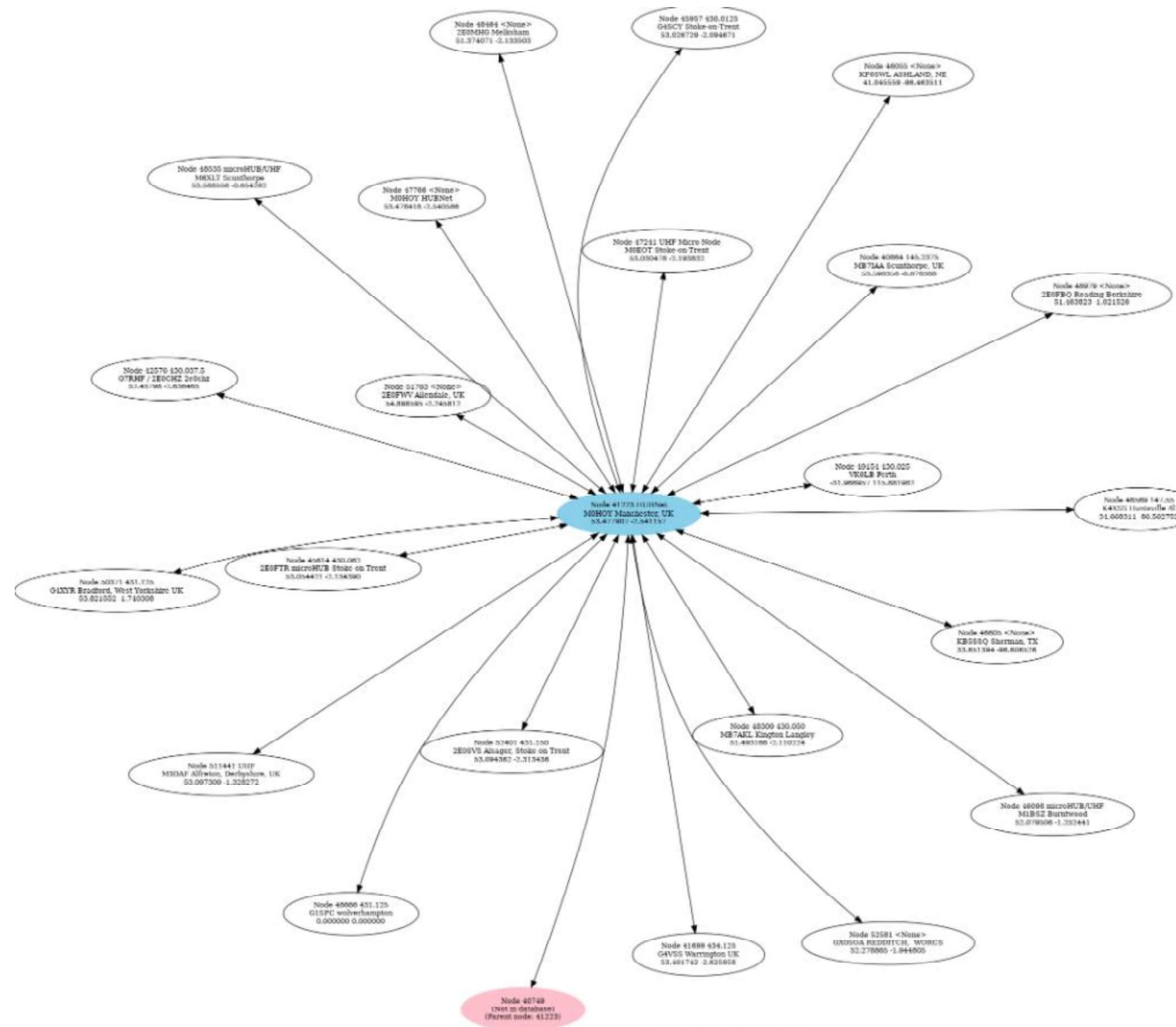*10 – Disconnects if it was linked most recently

WHAT'S AVAILABLE?

http://stats.allstarlink.org/

HUBNET UK

Allstar Link [surrounding node 41223] status of 11/10/20 22:41:21 GMT

ADDITIONAL CODES

*70 – Local Connection Status

*73 – Systemwide Connection Status

*81 – Say System Time

*A9 – Parrot Once (this command may change)

PRACTICAL DEMONSTRATION

Connect to HubNet UK (node 41223)

1. Announce your call "W6MW controlling"

2. Key Radio & Enter *341223

3. Connection Made & Announced. Have a QSO!

4. Find a Break in the Conversation

5. Key Radio & Enter *10 (Disconnect Last Connection)

6. Announce your call sign. "W6MW clear"

PLEASE REMEMBER TO UNLINK!

If you leave the repeater linked"

1. Everyone has to listen to it until someone clears it.

2. It's harder to use the repeater between QSO's

3. Everyone on both sides of the link hear us

W7SCS ALLSTARLINK

Enjoy!

de Mark, W6MW

IF YOU WANT YOUR OWN... SOME VENDORS OF ALLSTAR NODES:

https://wb6amt.com/t-hunt-gear/

https://hamprojects.info/shari/

https://technobygeorge.com/

https://www.node-ventures.com/