

Proposed United Stated DMR & FM Simplex Node Channel Plan

ALPHA TAG	RECEIVE (RX)	TRANSMIT (TX)	MODE	SQUELCH TYPE	TONE (Hz)	COLOR CODE	TIME SLOT	TALK GROUP	DESCRIPTION
NTAC600	446.000	446.000	FM	-	-	-	-	-	National US Analog FM Call Channel
NTAC650	446.500	446.500	FM	-	-	-	-	-	Backup US Analog FM Tactical Channel
DTAC075	446.075	446.075	DMR	-	-	1	1	99	National US DMR Call Channel
DTAC925	445.925	445.925	DMR	-	-	1	1	99	Backup US DMR Tactical Channel
STAC500	446.500	446.500	FM/DMR	-	-	1	1	99	Shared US FM/DMR Tactical Channel
STAC345	433.450	433.450	FM/DMR	-	-	1	1	99	Shared US FM/DMR Tactical Channel
HS-A	427.505	427.505	DMR	-	-	1	2	9	DMR Hot Spot & Alternative Simplex
HS-1	427.515	427.515	FM	CTCSS	100.00	-	-	-	FM Echolink & Alternative Simplex
HS-B	427.525	427.525	DMR	-	-	1	2	9	DMR Hot Spot & Alternative Simplex
HS-2	427.535	427.535	FM	CTCSS	100.00	-	-	-	FM Echolink & Alternative Simplex
HS-C	427.545	427.545	DMR	-	-	1	2	9	DMR Hot Spot & Alternative Simplex
HS-3	427.555	427.555	FM	CTCSS	100.00	-	-	-	FM Echolink & Alternative Simplex
HS-D	427.565	427.565	DMR	-	-	1	2	9	DMR Hot Spot & Alternative Simplex
HS-4	427.575	427.575	FM	CTCSS	100.00	-	-	-	FM Echolink & Alternative Simplex
HS-E	427.585	427.585	DMR	-	-	1	2	9	DMR Hot Spot & Alternative Simplex
HS-5	427.595	427.595	FM	CTCSS	100.00	-	-	-	FM Echolink & Alternative Simplex

The 427 MHz channel plan was developed due to low use amateur television and the low power nature of hot spot or simplex operation as an Echolink node or point to point tactical communication use cases. 5 channels for DMR and 5 for analog/other provides great multi-mode use to make the most of the spectrum available to amateur radio operators in the United States. Additionally, the lower noise floor could be a benefit for increased range based on the properties of DMR at 427 MHz. A 100.00 Hz tone should be standard to reject any local interference on the analog frequencies.

NOTE: The 70cm Amateur Radio allocation varies regionally. In the United States, Australia and Trinidad and Tobago the band ranges from 420 to 450 MHz with some geographical limitations; in Canada, the band is only 430–450 MHz; in the UK, amateurs are allocated 430–440 MHz. By international treaty between the US and Canada, operation in the portion of the band from 420 to 430 MHz is prohibited north of Line A, which runs just south of the Canada–US border from Washington state to Maine, and east of Line C, which runs from northeast to southeast Alaska.

More about Line A and Line C can be found here: <https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/general/frequency-coordination-canada>