Colorado Council of Amateur Radio Clubs

P.O. Box 24244 Denver, CO 80224-0244 http://www.ccarc.net

AGENDA

October 24, 2020

Meeting called to order via ZOOM session by Chairperson Doug (N7LEM) at 1305.

- Introductions of those online and on phone.
- Announcement of any SK, moment of silence for those we lost..
- Secretary's Report & Approval of Minutes from Spring 2020
 - Motion to accept George(WB0CDI), second Joe (KD0TYU).
 - Motion accepted.
- Treasurer's Report
 - Report displayed online
 - Doug (K2AD) requested clarification on the dates on the renewals. Wayne responded.
 - No further questions.
- Frequency Coordinator's Report
 - Tracy (KI0HC) reports that we are current in coordination.
 - Active committee available to assist if anyone has questions
 - 485 active coordination, 40 new, no pending, 1 VHF wait list, 18 proposed decoordination, 14 overdue for on the air and 22 missing annual reports.
 - Annual reports will be due in the near future.
- Colorado ARRL Section Manager's Report by Robert Wareham (N0ESQ).
 - First meeting as SM.
 - 43 ARRL clubs in Colorado, 3736 ARRL members (increase of 3.4%)
 - Will be visiting around the state once able.
 - Efforts to gain more ARRL members (goal is 1000 in Rocky Mtn Division).
 - Section Manager appointment of regional Assistant Section Managers to promote and support ARRL programs across the state.
 - Doug (K2AD) asked about losing a portion of the 3 GHz frequency band. When do we need to remove off and what is the possibility of losing the other portion of the band. Robert (N0ESQ) and Jeff (K0RM) responded that national efforts are still being pursued to keep the frequencies and things may change.
- Old Business:
 - Repeater Maps
 - CCARC has not printed maps in quite awhile due to corrupt database.
 - Database has been cleaned up now.

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- Funding is available to print maps per Wayne (N0POH).
- Frequency Coordination Committee will look into the next steps required.
- Webmaster needed
 - One individual had volunteered but has not been heard from.
 - Wayne (N0POH) is doing what he can
 - Still looking for webmaster. Any suggestions to be sent to Chairperson.
- Colorado Connection proposed Constitution change (attached)
 - Changes sent out to members and Chairperson asked if any comments.
 - Paul (W0PIH) asked what prompted the document to be circulated.
 - Doug (N7LEM) reported that the Colorado Connection requested the change be considered.
 - Discussion followed.
 - Points mentioned:
 - This change is not about defining what a club is but membership to the CCARC.
 - Question was is it necessary to act upon this single change if the council is going to review the entire constitution in the near future.
 - Motion to accept change made by Bob (K0NR) seconded by Tony (N0AUS).
 - John (W0VG) called for the question.
 - Members polled for the roll call vote: (Ayes 18 with 2 Nays)
 - Change to bylaws accepted and will be incorporated into the council's documents.
- New Business: [45 min]
 - Officer nominations for Spring 2021
 - Open positions are Vice-Chairman and Treasurer
 - Current Treasurer Wayne N0POH indicated he would run for another term
 - Chairperson asked to volunteers to form a nomination committee. No members stepped forward to serve on the committee. He will reach out to members personally.
 - Making the Repeater Database available on-line
 - Discussion followed:
 - Willem (AC0KQ) presented an overview of the proposed online data inquiries that could be offered if approved.
 - Link to a public lookup page would be added to CCARC website if approved.
 - Mark (N7CTM) suggested a couple items to be considered (export function, additional details for repeater (output frequency and access

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tones).

- Doug (K2AD) gave history on protecting repeater locations. Trustee would have to override the default to not show location.
- Emit (W0UAW) asked if any of the data point will be protected when information exported. Willem responded any information contained in the database can be protected.
- Walter (WZ0N) suggestion on only exported open repeaters and not closed. Doug (K2AD) offered why all repeaters need to be reported but not access tones.
- Motion by Doug (K2AD), seconded Gerry (W0GV) to add this information on the public website:
 - Motion carried with no objections.
- Frequency Use Plan guidance on nodes/hotspots
 - Discussion followed:
 - Bob (K0NR) gave history of several issues encountered without guidance/coordination.
 - Doug (K2AD) presented a Frequency Use Plan (FUP) document from 2018 and history on frequencies that could be used for hotspots (attached).
 - Several options where discussed.
 - Doug (N7LEM) suggests that council publish a "How to" document on where (frequencies) and how to implement these types of services. A quick guideline published on the website while other options are considered by the frequency coordination committee.
 - Frequency Coordination Committee to take this under consideration for future allocations. Committee to provide a report at the Spring meeting.
- Doug (N7LEM) has appointed John (W0VG) to form a committee to review all of the council's Bylaws and Constitution for members to review and adopt. It has been quite awhile since they have been reviewed and updated to reflect current requirements.
 - A committee of 12 members where presented as the committee to work on this.
 - John Maxwell, Rocky Mountain Ham Radio
 - James Cizek, Northern Colorado Amateur Radio Club
 - Rob Strieby, Loveland Amateur Radio Club
 - Mark Skelton, Longmont Amateur Radio Club
 - Dave Blaylock, Colorado Connection
 - Dave Novotny, Cheyenne Mountain Repeater Group
 - Jeff Carrier, Canon City/Fun Machine Repeaters
 - Chris Truby, Pueblo Amateur Radio Club
 - Chris Depuy, Montrose Amateur Radio Group
 - Kevin Milner, Ski Country Amateur Radio Club
 - Gerry Villhauer, Denver Radio Club
 - Robert Wareham, Legal Counsel and ARRL Section Manager

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- Wayne (N0POH) requested that the committee review the required items to keep the council 501(c)(3) compliant.
- Committee to report back to the council at the Spring 2021 meeting.
- Chairperson asked if any council member present had any additional items that need to be addressed at this meeting.
 - Nothing presented.
- Next meeting date and location selection.
 - Face to Face meeting will be determined based upon any restrictions that may be in place.
 - Question asked if council will offer future meetings via ZOOM and it was affirmed that the council will support ZOOM options in the future.

Chairperson closed the meeting following a motion and second at 1520.

ZOOM session was left active for members to socialize.

	Voting Delegates in Purple								Roll Call Vote
Status	OrganizationName	Delegate	Call	Н	Alternate	Callsign	Н	Proxy	Article III, Members Vote
Current	285 Techconnect Radio Club	Jim Langsted	KCØRPS		Jim Moravec	NØCOT			
Current	Arapahoe County ARES Inc	Peter Meer	KCØVAQ		Zeke Ragsdale	кøхк			
Deliquent	Arkansas Valley ARC	Ken Niles	NØEMU		Sharon K Agun	KCØPBR			
Current	Aurora Repeater Association	Wayne Heinen	NØPOH	Х	Steve Cearley	KØIBM			Aye
Current	Big Sandy Amateur Radio Club	Ross Hansen	KØRTS	Х	Doug Freeman	KEØGVY			Aye
Current	Boulder Amateur Radio Club	George Packer	WBØCDI	Х	Michael Derr	W3DIF	Х		Nay
Deliquent	Boulder County ARES	Mark Huff	KØLRS		George Weber	KAØBSA			
Current	Castle Rock Repeater Group	Nick Meacher	AAONM		Jason Quynn	KC4QYX			
Current	Cherry Creek Young Amateur Radio Club	Bob Sterner	KBØBS						
Current	Cheyenne Mountain Amateur Radio Club	Mike Wisch	WØLG		Roger Johnson	KGØI			
Current	Cheyenne Mountain Repeater Group	David Novotny	WA6IFI	Х	Mike Palmer	кøнүт			Aye
Current	Colorado Amateur Repeater Network	Mike Wisch	WØLG		Roger Johnson	KGØI			
Current	Colorado Connection Repeaters	Doug Sharp	K2AD	Х	John Thomson	WØIG			Aye
Current	Colorado Repeater Association	Matt Sturtz	KBØKZR		Dave Maciorowski	WA1JHK	Х		Aye
Current	Colorado State University ARC	James Cizek	κιφκν						
Current	Colorado Traffic League	Dave Johnston	W8XAL		Willem Schreuder	ACØKQ	Х		Aye
Current	Delbert E. Noakes KCØVJD	Delbert E. Noakes	KCØVJD						
Current	Denver Radio Club	Gerry Villhauer	WØGV	Х	Orlen Wolf	WWØLF			Ауе
Current	Denver Radio League	Tom Dall	KD4TD		David Mayes	KC7MP			
Deliquent	Donald Yowell KIØIS	Donald Yowell	KIØIS						
Current	Down River Control Group	Gary Hampton	AD0WU		Paul Hampton	WOPIH	Х		Nay
Current	Durango Amateur Radio Club	John Kastak	N9NLC		David Bygel	KDØWWT			
New	Eastern Colorado DX Assn	Don Zielinski	KØIPV		Bob Chapman	KØMVB			
Current	Estes Valley Amateur Radio Club	Larry Olson	W9INE		David O'Farrell	WBØIXV			
New	Fun Machine Linked Repeater System	Jeff Carrier	KØJSC		Mike Gurski	KØGUR			
Current	Garden of the Gods Amateur Radio Club	David L Givan	KØIRP		Donald Yowell	KIØIS			
Current	Grand Mesa Contesters of Colorado	Dan Norman	NØHF		Ken Anderson	WØETT			
Current	Grand Mesa Repeater Assoc.	Al Acker	WA4HND						
Current	Indian Peaks Radio Club	Matt Reynolds	KDOPYK		Dennis Whalen	KODWW			
Current	Longmont Amateur Radio Club	Bryan Gonderinger	AF0Wq	Х	Chuck Poch	КØТР			Aye
Current	Loveland Repeater Association	Dennis Dyer	WØXYZ	Х	Strieby	WØFT	Х		Aye
Current	Mile High DX Association	Richard Williams	K8ZTT		Jonathan Woo				
Current	Montrose Amateur Radio Club	Chris Depuy	WBØITG	Х	Larry Braden	W7LEV			Ауе
Current	Mountain Amateur Radio Club	Laird Johnson	KDØVNV		Bill Wallick	KCØFNV			
Current	Northern Colorado Amateur Radio Club	Wayne Hall	ADØKE		Joe Hawley	KDØTYU	Х		Aye
Deliquent	Park County Radio Club, Inc	Connie Krajcirik	WØSNO		Dan Kern	WØDFU			
Current	Parker Radio Association	Dan Grady	N2SRK		Justin Daniels	AE2L			
Current	Paul Deeth WA2YZT	Paul Deeth	WA2YZT		None				
Current	Pikes Peak FM Association	Rob Roller	N7LV		Dennis Major	NOABC			
Current	Pikes Peak Radio Amateur Association	Doug Nielsen	N7LEM	Х	Jim Bishop	KDØKQL			Ауе
Current	Pueblo Amateur Radio Club	Bill Nicoll	KØCGO		None				
Current	Pueblo West Amateur Radio Club	Randy Linnen	KEØGMS	Х	Jim McConnell	NEØDA			Ауе
New	Radops of El Jebel	Ken Behrens	KBØYLN	Х	Emit Hurdelbrink	WØUAW	Х		Ауе

Status	OrganizationName	Delegate	Call	Н	Alternate	Callsign	н	Proxy	Article III, Members Vote
Current	Rocky Mountain Ham Radio	John Maxwell	WØVG	Х	Mark Skelton	N7CTM	Х		Aye
Current	rent Rocky Mountain Radio League Joe Dic		wтøс		Dunnigan MacIlwaine	K1DUN			
Current	Royal Gorge Amateur Radio Club	Dennis Glowienka	WBØWDF		Philip Ott	WAONLK			
New	w San Luis Valley Amateur Radio Association David Newm		NØKM	Х	Bob Galey	KEØJDN			Aye
Current	Ski Country Amateur Radio Club	Tony Ferris	NAØUS	Х	Kevin Milner	KDØMA			Aye
Current	Summit County Amateur Radio Club	Paul Shackelford	WBØQMR		Gary Peterson	KBØDEB			
Current	Tracy Helmhold KIØHC	Tracy Helmhold	кі́øнс	Х					N/A
Current	Tri-Lakes Monument Radio Association	Paul Swanson	AAØK		Bob Witte	KØNR	Х		Aye
Current	Walter Zorn WZØN	Walter Zorn	WZØN	Х	None				N/A
Current	Weld Amateur Radio Society	Neil Temmer	KDØMRY		Matt Thompson	KDØYOR			
Current	Western Colorado Amateur Radio Club	Steve Delaloye	KEØBPD		Brad Chestnut	AKØBC			
	ARRL Section Manager	Robert Wareham	NØESQ	Х					N/A
	ARRL Rocky Mountain Division Director	Jeff Ryan	KORM	Х					N/A

Fall 2020 CCARC Treasurer's Report – October 24, 2020

Beginning bal	\$7,436.72					
INCOME						
Date	From	For	Amount			
05/18/2020	Grand Mesa Repeater Assoc	Dues	\$25.00			
07/12/2020	Indian Peaks Radio Club	Dues	\$5.00			
07/12/2020	Mile High DX ASSN	Dues	\$8.80			
07/12/2020	Loveland Repeater Association	Dues	\$5.00			
09/20/2020	Radops of El Jebel (2021)	Dues	\$10.00			
10/15/2020	Colorado State University ARC	Dues	\$5.00			
Total Income						
EXPENSES						
Date	То	For	Amount			
05/16/2020	PPRAA - COQP	10 Plaques	\$450.00			
05/28/2020	John Maxwell	Overdue Coordinations Mailing	\$70.00			
Total Expenses \$520						
Ending Balar	nce ¹		\$6,975.52			

¹ Less Allocated funds: Repeater Maps \$318.27 =

Available Balance	\$6,657.25
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Prepared by Wayne Heinen NØPOH Treasurer

CCARC Constitution – Proposed change to Article III, Members

Motion: "The Colorado Connection Repeaters Inc proposes the following change to the CCARC Constitution, Article III, Membership. If approved, the criteria will be applied to any new or renewing club effective January 1, 2021. "

Current wording as approved and published

Section 1. The Council shall be comprised of Amateur Radio Clubs or organizations based in the State of Colorado and shall be qualified for membership when the following requirements are met:

- A. The Club or Organization must conduct regular meetings.
- B. The Club or Organization must have duly elected officers.
- C. The Club or Organization must be accepted by a majority vote of this Council.
 - 1. The Executive Committee of CCARC shall have the authority to tentatively accept membership(s) until approved or disapproved by a vote taken at the next regularly scheduled meeting of the CCARC.
- D. The Club or Organization must have a membership equal to or greater than its elected Officers.

Proposed changes to be considered

Section 1. The Council shall be comprised of Amateur Radio Clubs or organizations based in the State of Colorado and shall be qualified for membership when the following requirements are met:

- A. The Club or Organization must have a document(s) of organization that are published in the public domain.
- B. The Club or Organization must have duly elected officers as defined in the document(s) of organization.
- C. The Club or Organization must conduct regular meetings and record minutes. Minutes may be paper or electronic recording methods that are distributed at future meetings, by e-mail, by newsletter, by web site or verbally on a regularly scheduled club net.
- D. The Club or Organization must have at least four persons holding a valid amateur radio license, and must submit a roster of said members to the CCARC for private Executive Committee examination upon request.
- E. The Club or Organization must be accepted by a majority vote of this Council.
 - 1. The Executive Committee of CCARC shall have the authority to tentatively accept membership(s) until approved or disapproved by a vote taken at the next regularly scheduled meeting of the CCARC.

Submitted: April 21, 2020 by Douglas Sharp, K2AD – Delegate from the Colorado Connection Repeaters Inc.

A proposal to re-allocate 433.000 - 435.000 MHz and 438.000-440.000 MHz as documented in the CCARC 70cm Frequency Use Plan Introduced, Discussed and Tabled: 10/28/2017 CCARC General Meeting Proposed: April 21, 2018 by Doug Sharp, K2AD CCARC Chairman

Input	Output	Bandwidth	Modulation	Assigned	Use Туре
433.0000	•	Wideband	Analog	pool	Auxiliary Operation - Full Duplex
433.0250		Wideband	Analog		Auxiliary Operation - Full Duplex
433.0500	438.0500	Wideband	Analog	pool	Auxiliary Operation - Full Duplex
433.0750	438.0750	Wideband	Analog	pool	Auxiliary Operation - Full Duplex
433.1000		Narrowband	Digital	pool	Auxiliary Operation - Full Duplex
433.1125		Narrowband	Digital	pool	Auxiliary Operation - Full Duplex
433.1250		Narrowband	Digital	pool	Auxiliary Operation - Full Duplex
433.1375		Narrowband	Digital	pool	Auxiliary Operation - Full Duplex
433.1500		Narrowband Narrowband	Digital	pool	Auxiliary Operation - Full Duplex Auxiliary Operation - Full Duplex
433.1625 433.1750		Narrowband	Digital Digital	pool pool	Auxiliary Operation - Full Duplex
433.1750		Narrowband	Digital	pool	Auxiliary Operation - Full Duplex
433.2000		Narrowband	Digital	ESE	Statewide Deployable ESE Repeater
433.2125		Narrowband	Digital	in-use	Statewide Deployable Repeater (RMHAM Deployable DMR)
433.2250		Narrowband	Digital	in-use	Statewide Deployable Repeater (RMHAM Deployable DMR)
433.2375		Narrowband	Digital	in-use	Statewide Deployable Repeater (RMHAM Deployable DMR)
433.2500	438.2500	Narrowband	Digital	ESE	Statewide Deployable ESE Repeater
433.2625	438.2625	Narrowband	Digital	in-use	Statewide Deployable Repeater (EOSS Deployable DMR)
433.2750	438.2750	Narrowband	Digital	in-use	Statewide Deployable Repeater (EOSS Deployable DMR)
433.2875	438.2875	Narrowband	Digital	in-use	Statewide Deployable Repeater (EOSS Deployable DMR)
433.3000	438.3000	Narrowband	Digital	ESE	Statewide Deployable ESE Repeater
433.3125	438.3125	Narrowband	Analog or Digital	pool	Statewide Deployable Repeater
433.3250	438.3250	Narrowband	Analog or Digital	pool	Statewide Deployable Repeater
433.3375		Narrowband	Analog or Digital		Statewide Deployable Repeater
433.3500		Narrowband	Digital	ESE	Statewide Deployable ESE Repeater
433.3625		Narrowband	Analog or Digital		Statewide Deployable Repeater
433.3750 433.3875		Narrowband Narrowband	Analog or Digital Analog or Digital	· · · · · · · · · · · · · · · · · · ·	Statewide Deployable Repeater Statewide Deployable Repeater
433.4000		Narrowband	Analog or Digital	· · · · · · · · · · · · · · · · · · ·	Statewide Deployable ESE Repeater
+55.4000	430.4000	Narrowbaria	Analog of Digital	LJL	
433.4250	438.4250	Wideband	Analog	in-use CNUM 657	Auxiliary Operation - Full Duplex
433.4500	438.4500	Wideband	Analog	pool	Auxiliary Operation - Full Duplex
433.4750	438.4750	Wideband	Analog	pool	Auxiliary Operation - Full Duplex
433.5000		Wideband	Analog	pool	Auxiliary Operation - Full Duplex
433.5250		Wideband	Analog	pool	Auxiliary Operation - Full Duplex
433.5500		Wideband	Analog	pool	Auxiliary Operation - Full Duplex
433.5750 433.6000		Wideband Wideband	Analog Analog	pool	Auxiliary Operation - Full Duplex Auxiliary Operation - Full Duplex
433.6000		Wideband	Analog	pool pool	Auxiliary Operation - Full Duplex
433.6500		Wideband	Analog	pool	Auxiliary Operation - Full Duplex
433.6750		Wideband	Analog	pool	Auxiliary Operation - Full Duplex
433.7000		Narrowband	Digital	pool	Narrowband Digital Repeater
433.7125		Narrowband	Digital	pool	Narrowband Digital Repeater
433.7250		Narrowband	Digital	pool	Narrowband Digital Repeater
433.7375		Narrowband Narrowband	Digital Digital	pool	Narrowband Digital Repeater
433.7500 433.7625		Narrowband	Digital	pool	Narrowband Digital Repeater Narrowband Digital Repeater
433.7023		Narrowband	Digital	pool pool	Narrowband Digital Repeater
433.7875		Narrowband	Digital	pool	Narrowband Digital Repeater
433.8000		Narrowband	Digital	pool	Narrowband Digital Repeater
433.8125	438.8125	Narrowband	Digital	pool	Narrowband Digital Repeater
433.8250	438.8250	Narrowband	Digital	pool	Narrowband Digital Repeater
433.8375	438.8375	Narrowband	Digital	pool	Narrowband Digital Repeater
433.8500		Narrowband	Digital	pool	Narrowband Digital Repeater
433.8625		Narrowband	Digital	SNP	Narrowband Digital Repeater
433.8750		Narrowband	Digital	SNP	Narrowband Digital Repeater
433.8875	438.8875	Narrowband	Digital	SNP	Narrowband Digital Repeater
433.9000	438 ባበበባ	Wideband	Mixed Mode	in-use CNLIM 658	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
433.9250		Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
433.9500		Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
433.9750		Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.0000		Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode

434.0250	439.0250 Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.0500	439.0500 Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.0750	439.0750 Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.1000	439.1000 Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.1250	439.1250 Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.1500	439.1500 Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.1750	439.1750 Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.2000	439.2000 Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.2250	439.2250 Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.2500	439.2500 Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.2750	439.2750 Wideband	Mixed Mode	pool	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.3000	439.3000 Wideband	Mixed Mode	SNP	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.3250	439.3250 Wideband	Mixed Mode	SNP	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.3500	439.3500 Wideband	Mixed Mode	SNP	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.3750	439.3750 Wideband	Mixed Mode	SNP	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.4000	439.4000 Wideband	Mixed Mode	SNP	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.4250	439.4250 Wideband	Mixed Mode	SNP	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.4500	439.4500 Wideband	Mixed Mode	SNP	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.4750	439.4750 Wideband	Mixed Mode	SNP	Wideband / Narrowband , Analog or Digital Repeater / Auxiliary / Mixed Mode
434.5000	439.5000 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.5125	439.5125 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.5250	439.5250 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.5375	439.5375 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.5500	439.5500 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.5625	439.5625 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.5750	439.5750 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.5875	439.5875 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.6000	439.6000 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.6125	439.6125 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.6250	439.6250 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.6375 434.6500	439.6375 Narrowband 439.6500 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.6625	439.6625 Narrowband	Digital Digital	pool pool	Narrowband Analog or Digital Repeater (no wideband operation) Narrowband Analog or Digital Repeater (no wideband operation)
434.6750	439.6750 Narrowband	Digital	pool	Narrowband Analog of Digital Repeater (no wideband operation)
434.6875	439.6875 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.7000	439.7000 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.7125	439.7125 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.7250	439.7250 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.7375	439.7375 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.7500	439.7500 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.7625	439.7625 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.7750	439.7750 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.7875	439.7875 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.8000	439.8000 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.8125	439.8125 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.8250	439.8250 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.8375	439.8375 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.8500	439.8500 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.8625	439.8625 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.8750	439.8750 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.8875	439.8875 Narrowband	Digital	pool	Narrowband Analog or Digital Repeater (no wideband operation)
434.9000	439.9000 Narrowband	Digital	SNP	Narrowband Analog or Digital Repeater (no wideband operation)
434.9125	439.9125 Narrowband	Digital	SNP	Narrowband Analog or Digital Repeater (no wideband operation)
434.9250	439.9250 Narrowband	Digital	SNP	Narrowband Analog or Digital Repeater (no wideband operation)
434.9375	439.9375 Narrowband	Digital	SNP	Narrowband Analog or Digital Repeater (no wideband operation)
434.9500	439.9500 Narrowband	Digital	SNP	Narrowband Analog or Digital Repeater (no wideband operation)
434.9625	439.9625 Narrowband	Digital	SNP	Narrowband Analog or Digital Repeater (no wideband operation)
434.9750	439.9750 Narrowband	Digital	SNP	Narrowband Analog or Digital Repeater (no wideband operation)
434.9875	439.9875 Narrowband	Digital	SNP	Narrowband Analog or Digital Repeater (no wideband operation)

Note: Satellite band exclusive from 435.000 - 438.000 MHz. No CCARC coordinated activities within this sub-band.

25 kHz - Analog or wideband digital 12.5 kHz - narrowband digital or analog special use