

# Anchorage Amateur Radio Club Newsletter



Next General Meeting  
August 4, 2017  
Carr Gottstein Building - 7:00pm



NO GENERAL MEMBERSHIP MEETING IN JULY



## KL7AA FIELD DAY PHOTOS



Early Saturday morning



KL7AA MTV on display



Operators weatherport and food tent



On the air—Saturday morning



Digital Station in operation



Setup continues



We were glad to have Tally  
(Thanks Kent KL5T) as the Field  
Day mascot, meeter and greeter,  
groundskeeper, supervisor and all  
around morale booster as part of  
the team.







KL7TS



KL5T



KL5T demonstrating safe climbing



KL7AA Satellite internet



Tally (and Kent) accommodations



Flags flying

Older equipment and projects on display. Thanks to Kent (KL5T) and Dave (AL7LO) for donating the equipment for the display





Wire Antenna setup



Tilt up tower install



A KL7TS teaching moment





2017 Walk and Roll for Hope Photos (Thanks to Karen Walker KL7KW)



KL7TS and KL7MM bike mobile



KL7MM and KL7KW



Walkers



Rest Station

KL7AA has deployed a robust MESH network serving the Anchorage bowl. Please see the following for more information regarding the ARDEN MESH network. Kent Petty (KL5T) is a great source of information on this and is willing to advise on the setup of a MESH node.



*AE6XE and KE6BXT Pleasant's Peak nodes*

Delivering quality, high-speed, data communications for Emcomm via Amateur Radio

## Project Objectives

The ARDEN™ Project's focus is Emergency Communications (EmComm). It seeks to provide hams a means to implement this technology in practical ways to support local and regional emergency communications needs. To that end, the project's objectives are to enable hams to:

- Stand up a working mesh node with minimal expertise and effort
- Configure the mesh network automatically so that advanced network knowledge is not needed
- Use low-cost, reliable commercial equipment
- Define standards for inter-network integration
- Support those in the process of designing and implementing EmComm networks
- Refine the software to make implementation easier, more reliable, and more manageable



*K6AH mobile nodes with dish and sector antennas*



# Features and Benefits

*Getting out of the WIFI band and onto ham-only channels on 2.4 and 3.4 GHz SIGNIFICANTLY improved the performance of our local network, and the tools and metrics in the latest release give us a much better understanding of our link performance.*

Exclusive Part 97 Channels	AREDN™ offers two channels on 2.4 GHz, 24 channels on 3.4 GHz and 7 non-shared channels on 5.8 GHz that are not shared with Part 15 users.
Over-the-Air firmware upgrades	Changes to firmware can be done over an RF link without physical access to the node.
Maximum data rate of 130 Mbps	802.11n has been added to the RF protocol. This improves the maximum data rate capability from 54 Mbps to 130 Mbps and allows AREDN™ nodes to take advantage of the Ubiquiti MIMO (concurrent data channels in both the vertical and horizontal polarization domains), although proportional data rate increases can also be achieved on non-MIMO devices.
Low investment entry	Portable nodes with cable and network switch can be established inexpensively; backbone nodes with multiple transceivers and cable are affordable.
Rapid deployment and implementation	Portable nodes can be setup in a few minutes.
Multiple antenna choices	There are many choices for sector (60-, 90- and 120-degree) antennas and highly directional (Yagi and dish) antennas.
Interfaces easily with other Internet capable devices	An AREDN™ network enables emergency responders to use familiar devices such as smart phones, tablets and laptop computers.



AE6XE Orange County California 3 node installation



## **AREDN™ In Use**

The Swallows Day Parade in San Juan Capistrano, California is, according to its organizers, the largest non-motorized parade in the United States. Hundreds of volunteers worked with local officials to maintain public safety among the estimated 35,000 people who attended the 57th annual event. A small team of FCC-licensed amateur radio operators who belong to the Radio Amateur Civil Emergency Service (RACES) provided specialized communication services.

The RACES team developed a plan to provide real-time video camera coverage of the parade route to support the Sheriff's department and emergency response agencies. Orange County Sheriff's Administrative Sgt. Joseph Cope noted that "This mesh camera system provided by RACES members was a very valuable tool for our command staff. As we were taking the calls, we could see the activity taking place in real time." In a meeting with city staff, he also stated, "The parade was the safest in years. Incredibly, there was only one arrest for fighting, which just happened to take place in the cameras view."

The parade cameras sent images across the radio network to the Orange County Sheriff's Department state-of-the-art Mobile Command Center (MCC). This MCC is a semi-tractor trailer with generated power and patch panels for video, data, and radio needs, including more than a dozen high-definition monitors positioned both internally and externally.



*Orange County Mobile Command Center*



## Practical EmComm Uses

Many applications are available to support the critical communications requirements of CERT, law enforcement assistance, ARES, RACES and events such as fire and hurricane watches.

### Telephones

- Voice over IP telephone systems
- SIP-based direct-dial calling to similarly configured smartphones within the network
- Gateway to PSTN when Internet is available to a node
- Asterisk and FreePBX

### Cameras

- Streaming video with IP webcams
- Skype-like video conferencing
- VideoChat

### Keyboard to Keyboard

- Email
- Chat applications – MeshChat

### Mapping

- Open Street Map
- HTML mapping with Google APIs

### Database and File Sharing

- CERT data gathering
- Cloud-based (OwnCloud) file sharing
- Google Person Finder

### Network Monitoring

- Nagios
- Zabbix
- Iperf
- SNMP

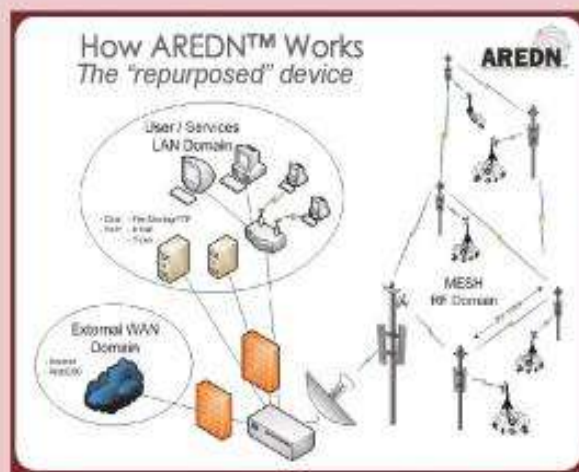


Need Help?  
Contact AREDN™  
[www.aredn.org](http://www.aredn.org)

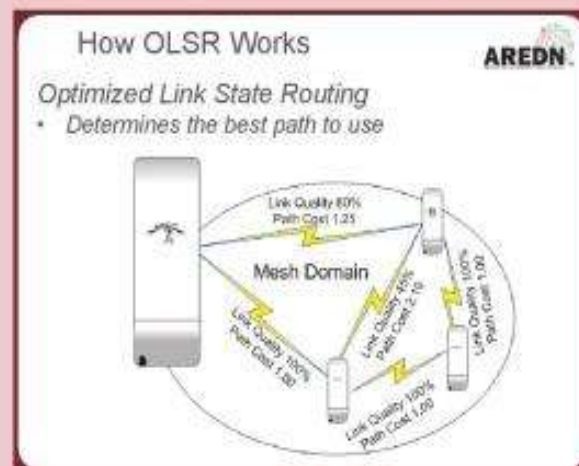
## How It Works

In the AREDN™ schematic model illustrated below we see the familiar external and user domains... although the user domain now contains computers which deliver services such as email, FTP, VoIP, chat, etc.

The new domain here is an RF mesh network which forms the business end of the AREDN™ technology.



The four devices, all Ubiquiti NanoStations, illustrated below have formed a "mesh."



The route data will take through this network is dependent on the reliability of the links between them.

ANCHORAGE AMATEUR RADIO CLUB

MEMBERSHIP MEETING

June 2, 2017

Carr Gottstein Building – APU Campus

Anchorage, AK

***UNAPPROVED AT PRINTING***

**Call to Order**

The meeting was called to order at 7:00 PM by President Lara Baker AL2R. A quorum was established. Members and guests introduced themselves, 23 were in attendance.

**Business**

Lara Baker AL2R informed the membership that a volunteer was needed for the Tour de Cure on Sunday June 4<sup>th</sup> and that two volunteers were needed for the Alaska Run for Women on June 10<sup>th</sup>. Lara also noted that there would not be a membership meeting in July, but the Board meeting will occur.

**Presentations**

T.J. Sheffield KL7TS gave a great presentation on Cross Band Linking. T.J. gave a brief history involving Cross Linking usage on the Iditarod Trail and TLRRS (Tatalina Long Range Radar System). The presentation included applicable rules, proper operation, PL/CTCSS, DCS (Digital Code Squelch), positive control as well as some great slides and graphics to augment the presentation.

Craig Bledsoe introduced a new ham (Bill Penny, KL4LU) and spoke briefly about the importance of welcoming and Elmering new hams.

**Door Prizes**

3 door prizes were awarded.

The meeting adjourned at 7:45pm

Respectfully submitted as recorded on June 2, 2017 by:

Richard Tweet KL2AZ, Secretary



ANCHORAGE AMATEUR RADIO CLUB  
BOARD MEETING  
June 20, 2017  
540 WEST INTERNATIONAL ROAD  
Anchorage, AK  
**(UNAPPROVED at Printing)**

The meeting was called to order at 7:03 PM by President Lara Baker AL2R

A quorum was established: (2 Officers, 7 Board members needed)

**BOARD MEMBERS PRESENT:**

Lara Baker AL2R, Richard Tweet KL2AZ, Keith Clark KL7MM, T.J. Sheffield KL7TS, George Wilkinson KL1JJ, Dave Heimke AL7LO, Dan Knapp KL4CX, Lil Marvin KL7YF

**BOARD MEMBERS PRESENT VIA TELECONFERENCE:**

Jim Wiley KL7CC, Rich Gillin AL4S

**NON-VOTING MEMBERS/GUESTS PRESENT**

Allen Abbott KB1QCE

**EXCUSED BOARD MEMBERS**

Alice Baker KL2GD, Kent Petty KL5T

**UNEXCUSED BOARD MEMBERS**

None

**REQUEST FOR AGENDA ITEMS**

None

**GUESTS**

Dave Webb N9AIG

**TIME CRITICAL ITEM(S)**

None

**REPORTS**

**SECRETARY REPORT**

Previous Board meeting minutes for May 2017 and General Membership meeting minutes for June 2017 were presented. Motion made by Dave Heimke AL7LO, seconded by Keith Clark KL7MM to accept the minutes with minor corrections. The motion carried unanimously.

**TREASURER'S REPORT**

Lara Baker AL2R reported that AARC had received a refund of gaming taxes of approximately \$200.

**FINANCE COMMITTEE**

Keith Clark KL7MM gave the report of the Finance committee from their June 19<sup>th</sup> meeting. Keith reported on finance reports and spending outlooks, restitution payments to AARC remain at \$0, Foreaker Group. Discussion was held on current data rate plans available to AARC and the availability to the MESH network.

## **FINANCE COMMITTEE**

Keith Clark KL7MM reported on the May 8, 2017 Finance Committee meeting. Members using Amazon Smile have resulted in a \$5 payment, restitution case is being researched, and inspection/appraisal is complete on FCC Building.

## **PROJECTS COMMITTEE**

Kent Petty KL5T reported on project status at the Anchorage Senior Center and noted Sid, KL7SID (Senior Center EC) is his contact there. Rotor control cables are installed, rotor install is next followed by antenna installation.

## **GRANT COMMITTEE**

Lara Baker AL2R reported there have been no grant requests received and no grant applications have been made on behalf of AARC. Lara reported on the Grant Committee's meeting with Laurie Wolf of the Foraker Group and the suggestions/guidance she provided to the committee for obtaining grants.

## **GAMING REPORT**

Lara Baker AL2R reported gaming reports are still being timely filed with \$0 gaming receipts and the AARC remains in good standing with the state gaming commission.

## **BUILDING COMMITTEE**

Dave Heimke AL7LO reported on the May 1<sup>st</sup> meeting with the airport leasing department. The committee was to reengage with the commercial appraiser to discuss the comparables and extraordinary assumptions the appraiser used to determine the \$.70/sf lease rate for the FCC property. The committee is actively building the case to be presented to the appraiser at a future meeting in order to achieve an agreeable lease rate. Dave presented the board with all lease options presented by airport leasing, application status, rent credits and use of volunteer labor, additional inspections for follow up discussions with the appraiser, certificate of occupancy, and the need for development of an AARC mission statement.

## **VE REPORT**

Lara Baker AL2R reported on the last testing session resulting in a new Technician and a new General licensee. Discussion was held on submissions and the FCC response files, remote vs. online testing, costs associated with printed exams, possible fees for testing.

## **TRUSTEE REPORT**

Keith Clark KL7MM reported that the KL7AA renewal was within the 90 day renewal window and was filed. Keith will be writing a letter of reference for a member applying for a college memorial scholarship. KL7AA will be used for Field Day and Keith will contact Randy Vallee for use of KL7G for the event. The Gold Nugget Triathlon volunteers will be using the .94/.67 repeaters. Lara reported that he has access to a helicopter that can be used to service the .30/.33 repeaters. Discussion noted the .30/.33 repeaters are not AARC's responsibility but are ARES to maintain. Jim Wiley KL7CC noted he is the Trustee for the ARES repeaters.

## **MEMBERSHIP REPORT**

None as Rich Gillin AL4S was excused

## **BY-LAWS**

None

## **GRANT COMMITTEE**

No report

## **GAMING REPORT**

Lara Baker AL2R reported that AARC is only required to file annual reports at this time per the accountant.



## **PROJECTS COMMITTEE**

Dave Heimke reported on the FCC Occupy project. Currently awaiting cost proposals from the general contractor on building capital improvement costs. Once received and compiled, a meeting will be scheduled with Airport Leasing to discuss lease rates.

## **EQUIPMENT REPORT**

None

## **VE REPORT**

Jim Wiley KL7CC reported that issues with the KL7AA website are still being worked and that there was nothing new to report. A brief discussion was held on online testing availability and associated requirements.

## **TRUSTEE REPORT**

Keith Clark KL7MM reported that 2017 Field Day will be using the club callsign at the 6721 Raspberry site.

## **MEMBERSHIP REPORT**

Rich Gillin AL4S reported on membership income for the month

## **BY-LAWS**

No report

## **ARES**

No report

## **OLD BUSINESS**

Web Migration – Discussed during VE report

Vacant Board Positions (Board member, Treasurer) and Newsletter editor – Discussion noted Board member position comes up for vote in September, current Board members are looking for a person to fill the Treasurer position. Club secretary continues as Newsletter Editor until a volunteer can be found.

AARC Naming Convention – Discussion held that as a 501c3, the AARC should be known as something other than a club. A suggestion was made to be the Anchorage Amateur Radio Community and the issue will be further discussed by the Board.

Access Policy – No discussion, will be discussed at July Board meeting

Education Manager – Brief discussion held as to what would the new position's duties and responsibilities be if the position is created. Further discussion will be held in July.

AARC Vision Statement – Continues to be a work in progress. The Board will vote on the policy in July

## **NEW BUSINESS**

None

## **PROGRAM FOR AUGUST MEETING (NO MEMBERSHIP MEETING IN JULY)**

Allen Abbott KB1QCE reported that the topic would be Public Service – Meet Our Partners. Organizations the AARC has supported in their events will be invited to speak regarding their Organization, how AARC has helped the event etc. Allen noted that the Anchorage Tour de Cure event raised \$200,000 for the American Diabetes Association.

## **ADJOURNMENT**

The meeting adjourned at 8:02 pm. Respectfully submitted as recorded on June 20, 2017 by Richard Tweet, Secretary



# Monthly Events



1st Friday each month: AARC general meeting - 7:00 PM in the Carr-Gottstein Building, on the APU Campus. Talk in will be on 147.33+ repeater. NO MEETING IN JULY

1st Thursday each month: Moosehorn Amateur Radio Club General meeting - 7:00 PM Location is at Borough Emergency Response Center on Wilson Way in Soldotna (behind Soldotna FD. Call for directions on 146.88 repeater (no tone). Moosehorn ARC also holds a weekly luncheon every Thursday, locations and times change — contact George Van Lone, KL7AN: [donnav@acsalaska.net](mailto:donnav@acsalaska.net)

2nd Saturday each month: PARKA (Polar Amateur Radio Klub of Alaska) Meeting at 11:00 AM. Polar **Amateur Radio Klub of Alaska. All amateurs welcome. Denny's on Denali Street in Anchorage. Some business is discussed.** Originally established as an all woman organization, membership now includes spouses or significant others. Talk in on 147.30+.

2nd Saturday each month (except for holidays): VE License Exams at 2:00 PM. at Hope Cottage 540 W. International. Be sure to bring photo ID, copy of license (if any) and any certificates of completion. Contact: Jim Wiley, KL7CC 688-0660.

3rd Tuesday each month: AARC Board Meeting at 7:00 PM at Hope Cottage 540 W. International. All hams are invited and encouraged to attend.

2nd Wednesday of each month: EARS general meeting at 6:00 PM. EARS meetings are held at the EARS shack location. Contact info - Ron Keech, KL7YK for information. EARS: 552-2664 (recording); Talk in on 146.67-. Email: [club@KL7air.us](mailto:club@KL7air.us) or [kl7yk@arrl.net](mailto:kl7yk@arrl.net)

4th Saturday of each month: Valley VE Testing at 7:00 PM. Sessions will be held at Fire Station 61, at 7 pm on the fourth Saturday of each month unless it is a major holiday weekend. Contact Ken Slauson, KL7VE, [Ken.Slauson@gmail.com](mailto:Ken.Slauson@gmail.com) or 907-376-8698.

The last Friday each month: MARA meeting at 7:00 PM, Wasilla Fire Station 61. Talk-in help for the meeting can be acquired on the 147.33 repeater. Further details can be found by contacting Don Bush, KL7JFT, [dbush@gci.net](mailto:dbush@gci.net). NO MEETING IN JULY

Every Monday at 11:00 AM: Meeting of interested Amateur Radio Operators — **and lunch at Denny's** on DeBarr — across from Costco. Many code and HF operators attend this function. Come talk radio. For information, contact Kathy O'Keefe, KL7KO, [kokalaska@gmail.com](mailto:kokalaska@gmail.com)

Every Saturday at 7:00 AM: **Meeting of a group of Amateur Radio Operators at Denny's on Denali for breakfast. Topics? Radio, photography, and upcoming events** For information, contact Kathy O'Keefe, KL7KO, [kokalaska@gmail.com](mailto:kokalaska@gmail.com).



## Active Nets in Alaska

### VHF NETS

The local VHF Nets have a Packet side as well. Look for 2 meter Packet at 145.01 (Eagle) and 147.96 (Valley). **The Eagle and Valley nodes provide a talk” or chat function. Also, if you are unable to connect directly to one of the nodes, try digipeating through EARS on either frequency. Do this by typing *c eagle v ears* or *c valley v ears* on the appropriate frequency. Check [www.KL7AIR.us](http://www.KL7AIR.us) for more information on the digipeaters.**

ARES Net: 147.33 w/ 103.5Hz tone (Backup 147.30 w/ 141.3Hz tone) —Thursdays at 8:00PM

No Name Net: 146.43 simplex—Sundays 8:00PM

South Central Simplex Net: 146.52 FM, 144.2 USB, 446.0 FM, 432.2 USB, 223.5 FM, 927.5FM, 1294.5 FM, 52.525 FM, 50.125 USB, 29.6 FDM, 28.4 USB, 145.01 Packet (Eagle Node), 147.96 Packet (Valley Node) - Tuesdays 8:00PM

Alaska VHF Up Net: 144.200 USB—Saturdays 9:00 AM

Alaska Morning Net: The Alaska Morning Net is held Monday through Saturday from 9:00 AM—11:00 AM on the IRLP Reflector 9109. This net can be reached via several hosting nodes in the area. Please visit [www.status.irlp.net/index.php?PSTART=2&mode=3](http://www.status.irlp.net/index.php?PSTART=2&mode=3) to find the closest node. Also the net can be reached via EchoLink on 9191 (WL7LP-R) and Allstar nodes 27133 and 29332. The Alaska Statewide ARES net is held on Thursday evenings at 8:30pm (following the Anchorage ARES net) at the same locations and also the 8:30pm Sunday evening Alaska Statewide Radio Link.

### HF Nets

Alaska Snipers Net: 3.920 MHz 6:00pm daily

Alaska Bush Net: 7.093 MHz 8:00pm daily

Alaska Motley Net: 3.933 MHz 9:00pm daily

ACWN (Alaska CW Net): 3540 kHz, 7042 kHz, 14050 kHz Non-directed, CW calling and traffic watch for relaying NTS of other written traffic. AL7N monitors continuously receivers always on WL2K. (RMS connection available— [AL7N@winlink.org](mailto:AL7N@winlink.org))

Alaska Pacific Net: 14.292 MHz 8:30am M-F

ERC HF Net: 3.880 MHz 8:30pm Sundays



DATA YOU CAN USE				
Frequency	Tone	Callsign	Features	Area
147.18-	88.5	ADES		JBER
146.88-	no tone	AL7LE	Phone patch	Kenai/Soldotna
146.82-	103.5	WL7CWE	IRLP	Anchorage
146.76-	123.0	KL3K	IRLP	Seward
146.94-	103.5	KL7AA	Phone patch	Anchorage to Wasilla
224.94-	no tone	KL7AA		Anchorage
444.70+	103.5	KL7AA	Phone patch	Anchorage
146.67-	103.5	KL7AIR	MARS station	Anchorage & Highway N
147.30+	141.3	KL7ION		Very Wide Area
146.85-	103.5	KL7JFU	Cross Banded to 444.600	Mat Valley
444.6+	103.5	KL7JFU	Cross Banded to 146.85	Mat Valley
146.91-	no tone	KL7JL		Homer
147.15+	107.2	KL5E	Phone patch	Eagle River/Chugiak
147.84-	103.5	WL7CWE		Wasilla repeater
147.33+	103.5	WL7CWF	Cross linked to 443.900	Very Wide Area
443.900+	103.5	WL7CWF	Cross linked to 147.33	Very Wide Area

South Central Area Simplex Frequencies	
146.52	National Calling and Emergency Frequency
147.57	DX Spotting Frequency
146.49	Anchorage Area Simplex Chat
146.43	Mat-Su Valley Simplex Chat
147.42	Kenai Peninsula Simplex Chat

WinLink Information		
144.9	WL7CVG-10	Anchorage Area RMS
145.19	KL7JFT-10	Palmer/Mat-Su RMS
147.96	KL7EDK-10	Fairbanks RMS
144.9	WL7CVG-4	South Central Digipeater
144.98	KL7AA-10	Anchorage AARC RMS





# July 2017

Sun      Mon      Tue      Wed      Thu      Fri      Sat

						1
2	3	4 HAPPY 4th of JULY!!	5	6 ARES Net	7	8
9	10	11	12 AARC Working Wednesday at Club Station	13 ARES Net	14	15
16	17	18 AARC Board Meeting	19 AARC Working Wednesday at Club Station	20 ARES Net	21	22
23	24	25	26 AARC Working Wednesday at Club Station	27 ARES Net	28	29
30	31					

If you have anything you'd like included in the next newsletter such as for sale items, articles, questions, etc. email *editor(at)kl7aa.net*

## Your current AARC Board/Officers

President	Lara Baker AL2R	president(at)kl7aa.net
Vice-President	Kent Petty KL5T	vicepresident(at)kl7aa.net
Treasurer	Alice Baker KL2GD	treasurer(at)kl7aa.net
Secretary	Richard Tweet KL2AZ	secretary(at)kl7aa.net
Board 2019	Dan Knapp KL4CX	
Board 2019	Lillian Marvin KL7YF	
Board 2019	Rich Gillin AL4S	
Board 2018	T.J. Sheffield KL7TS	
Board 2018	Keith Clark KL7MM	
Board 2018	VACANT	
Board 2017	George Wilkinson KL1JJ	
Board 2017	Jim Wiley KL7CC	
Board 2017	Dave Heimke AL7LO	
Activities	Allen Abbott KB1QCE	activities(at)kl7aa.net
Trustee	Keith Clark KL7MM	trustee(at)kl7aa.net
Newsletter Editor	Richard Tweet KL2AZ	editor(at)kl7aa.net
Membership	Rich Gillin AL4S	membership(at)kl7aa.net
VE Testing	Jim Wiley KL7CC	ve(at)kl7aa.net
Webmaster	Brendon Bruns KL1WK	webmaster(at)kl7aa.net
Internet/Network	Rich Gillin AL4S	ip(at)kl7aa.net