



EASTERN ARIZONA AMATEUR RADIO SOCIETY

EST. 1974 INC.



Club Address:

EAARS
P.O. Box 398
Solomon, AZ 85551

www.eaars.com

September 2015

Picnic Time!

The annual EAARS picnic that will be held on Saturday September 19th. At Discovery Park in Safford. Start time will be 2:00 pm. This is the same location that we have had the picnic for the past few years. EAARS will provide the meat, sodas and water.

This is a benefit of your membership in EAARS. As such it is **for current paid up members** and their immediate family members, such as spouse, child. If you are in doubt of your current membership status, send an email to me and I will advise you of your status.

It is suggested that you bring your own utensils (Steak Knives) . However EAARS will be providing paper plates and plastic utensils.

This is an RSVP event, so that we know how much meat to have on hand. Please send an email confirming your intention to attend and how many in your party. Email:

lgriggs@aznexus.net

Please do so no later than September 10th. This is our cutoff date for ordering items.

If you want to bring something to share such as salad, desert, etc. there will be a table set up to hold these items. Those of you that have attended previously know the drill.

73 de Larry *N5BG*



EAARS OPEN REPEATERS

PL 141.3 UNLESS NOTED OTHERWISE

ECHOLINK: 614350 IRLP: 7787

HELIOGRAPH PEAK AT SAFFORD, AZ:

146.860, 440.700 LINKED

146.900

145.010 PACKET

JACKS PEAK AT SILVER CITY, NM:

145.210 LINKED

WEST PEAK AT FT THOMAS, AZ:

145.350 ACCESS TO LINK TO NETWORK

PINAL PEAK AT GLOBE, AZ:

145.410 LINKED

SOUTH MT AT ALPINE, AZ:

145.270 LINKED

CABALLO MT AT TORC, NM:

145.470 LINKED

GREENS PEAK AT SHOW LOW, AZ:

146.700 LINKED

LITTLE FLORIDA AT DEMING, NM:

147.060 LINKED

MULE MT AT BISBEE, AZ:

147.080 LINKED

MT. LEMMON AT TUCSON, AZ:

147.160 LINKED

GUTHRIE PEAK, AT CLIFTON, AZ:

147.280 LINKED

Saguaro National Traffic System

VHF Net

If you happen to tune to the E.A.A.R.S. system every evening about 6:30 pm MST, you'll hear something like; "Good evening, and welcome to the Saguaro National Traffic System (NTS) net, this net meets nightly at 6:30 P.M. every night on the Eastern Arizona Amateur Radio Society repeaters, the purpose for this net is the passing of formal written NTS radiogram messages into and out of our coverage area and to wherever third party traffic is allowed by law. In times of emergency, radiograms may be used to communicate information critical to the welfare of disaster victims."

This is short part of the preamble for the Saguaro National Traffic System VHF Net which Eastern Arizona Amateur Radio Society has graciously allowed us to conduct this net on their network. These messages you hear during this net are radiograms or messages that are composed by ham and non-hams alike throughout the country and locally and relay through the means of ham radio to a local net (and in this case VHF net or HF through the Arizona Traffic and Emergency Net (ATEN)). The person that has received the message from a HF net or digital means will transmit to someone over the radio near the recipient of the message, then the person receiving the message off the air after receiving the message will pick up the phone and call or sometime e-mail the recipient.

All messages that are received over the Saguaro NTS net are valid messages even though it may seem that you hear the same messages over and over again which are referred to "NTS Common Messages." These are sent by a few individuals throughout the country, for the most part welcoming new people to the ham community or reminding hams to renewing their

2015 Officers and Staff

eaarsofficers@eaars.com to email all officers.

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Dave Wells
N7AM

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Open
Please Volunteer

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Angie *N7EMB*
Chris *N7JND*



license. For the new or old ham to National Traffic System, receiving these messages helps those hams understand how to receive a message from off the radio and then relay that by calling the recipient on the phone.

For more information concerning the Saguaro NTS VHF, visit SAGUARONET.NET or for more information concerning the ATEN HF NET, visit WWW.ATENAZ.NET. Or contact one the net managers Greg, *KC5ZGG* or Linda Lout, *AF7FT*.

Greg, *KC5ZGG*

Vail Vaqueo's 4H Ham Radio Project

ISS Contact ! ~~Attempt~~ - August 22, 2015

Being a ham Radio operator I am use to talking to people locally, across the U.S., and even in Europe. But the opportunity to talk to astronaut Kjell Lindgren was an exciting experience.

Hearing how they live and operate in such a small area was very interesting. It is also exciting to know that while the astronauts are busy with experiments they are willing to talk to school students to inspire and motivate future leaders. In hearing what Dr. Lindgren had to say one of the most interesting things that I learned was that that the makeup of the air on the I.S.S. is not much different from the makeup of the air on the earth except that there is a little more carbon dioxide in the air. Ever since the contact everyone has kept asking me what I enjoyed the most about the contact but I have to say I enjoyed every bit of the contact from start to finish.

Jake Weller KG7RHJ
Vail Vaquero's 4H



Wow! On Saturday, August 22, 2015 the Vail Vaqueros 4H Ham radio team talked to an astronaut in space. The astronaut's name was Kjell Lindgren who was on his first mission in space. The Ham radio team used a ham radio to communicate to the International Space Station (ISS). The contact lasted only eleven minutes, and about fourteen questions were asked.

During the ISS Ham Radio contact, I felt nervous and excited. I was kind of nervous before we did the contact and during the presentation because being on the stage, in front of people made me anxious that I would make a mistake, but when we actually made the contact I was totally ecstatic. I do wish I could have said my second question but, I'm still glad I got to say my first one at all. How many kids get to talk to an actual astronaut in space? What a great experience!

Zane Walker
Vail Vaquero's 4H



The Contact Out of This World

It was a hot August morning when we arrived at Empire High School around 7:20am. My mom and I had arrived early so we sat in the car until Richard, the keeper of the auditorium, arrived.

Once we got inside, my mom and I started setting everything up for the STEM booths. My nerves were pretty high all the way to the point where we made the contact but that is further into the story. After we got done setting up all the tables and stuff the radio team arrived to start setting up the equipment for the contact. They were about half way through with setting up when my fellow 4-H'ers started to arrive.

Once everyone had arrived my mom called us up to the stage to practice our presentation which was a good thing cause some of the slides got out of order. The practice presentation seemed to last forever so you can imagine how long the actual one seemed to last! After we were done with that, we went and looked at the booths that were set up in the lobby. There were some really cool things to look at!

Now it was time to do the presentation, my heart was racing. I was so nervous that I might mess up my lines, luckily I didn't! After we got finished with the presentation, we had a 10 minute break to go walk around. And then, it was the moment of truth. The time we had been waiting for, for months, we all got in our line. There was still about 12 minutes till the ISS would pass over. I started to get really excited and then it was time!

Larry was saying over the radio "NAISS, NAISS this is W7LB", he said that twice and FINALLY we heard it!! It was really happening!! It was Kjell (Chell) Lindgren! I was the first person to ask a question and it was really exciting!

I stepped up to the mic, took a deep breath, and said, "Hi this is Jerico, I'm 14 years old and my question is, What would happen if you damaged your space suit while you are out in the field? Over." I was overjoyed waiting for him to respond to my question.

After about 5 seconds of static he said, "Hi Jerico. Thanks for the question. If we start to loose pressure or the space suit wasn't working correctly we would immediately head back to the air lock and get back inside the vehicle and if we needed help we would meet up with our space walking partner to get back into the space ship. Over!"

I was way overjoyed at this point! I looked to my fellow 4-H'ers in amazement and told Matt that, that was SO COOL! I was so excited and happy I had so many thing running thru my mind at that point! I got to ask two questions but the second question I asked was a little muffled so I wasn't quit clear of what he said but it was still Really Really AWESOME!

After we were done asking all of our question we had a few guest speakers come up and talk about their booths. Thank you to, Raytheon, Texas Instruments, BSA, U of A Ham Club, GCU, Pima County 4H, TFD Station 19 and the astrology club from Ciennega High School for being there.

Even after I left, I was still in amazement to actually be able to make contact with an astronaut that was in space! I still can't put exactly into words the excitement I was feeling, never the less, I would do it all over again. It really was an experience of a life time!

Thank you to the radio team, The Vail School District, ARISS, NASA, Kjell Lindgren and my mom for making this all possible!

Jerico Dzicek
Vail Vaquero's 4H

Communication with Space

Isn't it cool to talk to an astronaut? Well, I thought so! Although I was doubting that we would make contact with the International Space Station (ISS), when astronaut Kjell Lindgren replied I was overjoyed.

I asked him if he ever dreamed of being an astronaut and he answered the he had always wanted to be one. Another one of my questions was, "What subjects do you have to study to become an astronaut?" He answered, "You should study medicine and anatomy," but the Air Force Academy is another good way.

This whole experience was a chance of a lifetime and has motivated me to get my ham radio license. Maybe, when I grow up, I'll be the one answering the kid's questions.

Sitka Midkiff

Vail Vaqueros 4H member



On Saturday, August 22nd, we went to Empire High School and made an I.S.S contact. The first day we tried we failed. The second attempt we tried and it was a success. The day we made contact we set up and had lots of people come. The contact came up and we asked questions to Kjell Lindgren, who is an astronaut. The contact was fun and we got to talk to a astronaut!!

Jacob Komper

Vail Vaquero's 4H

Tension was mounting, as we waited offstage to do our presentation. Although it wasn't the moment of truth, it felt like it. We were all so nervous because we didn't make contact last time. Finally we went onstage. After our presentation that seemed to last days, we went offstage to take a break. We had fifteen minutes to come back. After our much needed break, we came back onstage, lined up near the radio, and waited. We had about thirteen minutes to wait. Finally we heard the reassuring crackle of Kjell's voice. I was so excited to ask my question, I barely noticed we had only about four minutes left. I only got to ask one question, but it was a great one. He told me his favorite comfort item was his pictures of his family. If I were to go up to space that would be my favorite comfort item.

Matt Fosdick

Vail Vaquero's 4H



The Vail Vaqueros 4-H Ham Radio Club had the opportunity to contact an Astronaut aboard the International Space Station (ISS) on Saturday August 22. The contact took place at Empire High School using HAM radio technology, a hobby from around the world, the connection was established at approximately 11:38 AM. The club got to talk to astronaut Kjell Lindgren. The contact lasted 11 minutes, as the ISS moved over Tucson, and the club members were able to ask about 14 questions in that time. It was quite an experience.

During the presentation, I was really nervous that I might mess up my lines, there were many people watching at the Vail Theater of the Arts. While we were waiting for the contact I was excited and hopeful that we would connect with American astronaut Kjell Lindgren, who is on his first mission aboard the ISS. A month prior to this, the scheduled contact with Russian Cosmonaut Mikhail Kornienko, also on the ISS, failed to get a response. So once we actually established the connection and heard a response from Dr. Lindgren, I was overjoyed. We had waited for what seemed like centuries. The connection was clear and strong and he was able to answer all of our questions. Talking to an astronaut was awesome, and it has encouraged me in my goal to one day also be an astronaut and the first man on Mars.

Max Walker
Vail Vaquero's 4H

For more ISS contact information see: pimacounty4hamradio.shutterfly.com/lisscontact

Ham License Testing

There are four monthly VE test sessions in the **Tucson Area**.

Lighthouse YMCA / ARRL: First Thursday
Contact Matt, *AC7IL*, veregistration@ac7il.org

Oro Valley / ARRL: First Saturday
Contact licensing@tucsonhamradio.org

RST / Laurel (No Fee): Second Monday
Contact Diane, *AA3OF*,
dzimmerman2002@gmail.com

Jacobs Park YMCA / ARRL: Third Saturday
Contact Fred, *K7OFA*, k7ofa@arrl.net

Graham / Greenlee County Area
For VE testing on request, please contact Dave,
N7AM, and he will arrange it.

Technician License Class - Tucson
Every Tuesday, 6:30 - 9:00pm at TMC.
Contact Dan, *KC7VDA* for info.
kc7vda@gmail.com

Gals Night

Fall/Winter Net

Sept 7th – Dec 28st

Monday's 7:30 PM
Arizona time

On any of the **EAARS** repeaters

SEPTEMBER

| sun | mon | tue | wed | thu | fri | sat |
|-----|-----|-----|-----|-----|-----|-----|
| 30 | 31 | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 1 | 2 | 3 |

Send Event and Calendar
additions to
newsletter@eaars.com

EAARS Badges

Club badges are now available, see:
www.eaars.com/newsletter/badges.htm
For ordering information. Show your club colors!



For Sale

Yaesu FT-897D XCVR
LDG AT-897 Autotuner
RT Systems ADMS-4B Programming
Software and cable
Kenwood PS-430 Power Supply
Contact Wally, *W0OGN*
w.prill@outlook.com

GUIDELINES FOR REPEATER USE

or

Read it! Remember it! Practice it!

The EAARS Network is a high traffic repeater system with a very large coverage area, and as such, we often need some reminders of proper operation. These guidelines are not intended to be hard and fast rules, but rather things to remember and consider when using the network or any repeater. Many of these things are common sense or common courtesy, so keep them in mind.

Coverage: The system covers several thousand square miles, in parts of three states and two countries. Remember to keep your conversations short and try not to monopolize the system. If you are close to the person you are wishing to talk to, and you are only wanting to talk with him, you might consider simplex or another repeater, if your conversation will last more than a few minutes. There is no reason to tie up multiple repeaters with extended one on one conversations when you are only a few miles apart. Remember to allow ample time between transmissions to allow for people to join the conversation. If you are not wanting to be interrupted, then the conversation might be better to have on the telephone. Remember that people everywhere can hear what you say, there is no privacy.

The system is designed to give priority to mobile operations, especially during morning and afternoon drive times. This may be the only time some people have to get on the radio, so defer to them as they travel to and from work. If you are operating from a fixed location, and have plenty of hours in the day to use the radio, then utilize the system during the slower times.

Timing: The repeater system is not instantaneous. There is a time delay from when you key the microphone to when the other parties will hear your audio. This typically is at least half a second or so. So, key the mic, give a short pause, then start your statement. If you say a single word or a short phrase, it may be clipped and not heard properly (if at all) on other repeaters in the system. There is a “beep” that occurs about a second and a half after a person unkeys. This is known as a “courtesy tone”, and lets others know that you have finished. You should wait for that beep before you start talking. This second and a half delay gives time for people to break in with emergency traffic, or just to add comments or join the conversation.

The repeater system has a “hang timer” of around five seconds. That is the time delay from when you finish talking to when the repeater transmitter drops off. In normal usage, the repeater doesn’t have to drop out, and you should not wait for it to drop. Wait for the second and a half, then the beep, then pick up the conversation. If you wait for the carrier to drop, it adds a lot of dead time to your usage.

The repeater also has an approximate 3 minute “time out timer”, which limits the amount of time any single transmission can last. If you transmit longer than that, the timer will cut you off. The timer affects the link transmitter, so when it times out, the rest of the system will act normally. If you are timing out the repeater on a regular basis, you need to rethink your conversations. This isn’t HF!

Jargon: Avoid CB style jargon and “hamisms”. This isn’t CB radio, so leave the “10-4s”, “seventy thirds”, “got your ears on”, (and any other stuff that is common on CB) off the network. Likewise, there are a lot of other things that come from ham radio that aren’t needed. You don’t need to use Q signals or other abbreviations that are meant for CW operators. We’re not sending code, so we don’t need things like “QTH”, “XYL”, or “HI HI”. Plain language rules on 2M FM, so use it! You don’t sound more like a ham when you say things like “Got to QSY to the dinner table, the XYL is wanting an eyeball QSO, hi hi.” Likewise, you don’t need to use the word “handle” when referring to your name, and certainly don’t use “personal”, as that is straight from CB. Just say, “the name here is Bob” (unless of course it is something else).

Signal Quality: We use FM on two meters. That means the audio quality is going to be pretty good, if you have a decent signal into the repeater. Your signal level is how well your radio is getting into the repeater. This is usually reported by the station you are talking to by referencing the amount of noise in the background, while you are talking. A good strong signal to the repeater will be reported as “full quieting” or “no noise on your signal”. A weaker signal might be reported as “readable, but has some (or a lot) of noise”. A very weak signal will be reported as “barely making it”, “in and out”, “hard to copy”, or some other report that indicates that the signal is poor. If your signal is not good, it is best to wait and continue your conversation when you get into a better location. Don’t force everyone to try and decipher a barely readable signal! Unless you are in an emergency situation, or need to get some urgent message through, just relax and try again later. You may be hearing the repeater fine, but that doesn’t necessarily mean that the repeater hears you as well. The repeater is fairly balanced when using a 25 to 50 watt mobile radio; if you are hearing it good, you will probably be getting into it about the same. But many people are using a 2 watt handie talkie, and that just doesn’t work well unless you are pretty much line of sight to the repeater. If you’re on an HT, and are getting poor reports, you might try a different location. Sometimes just a few feet will make a big difference.

Along with signal, audio quality and level are very important. If your transmit audio is too strong, or too soft, it will be hard to understand you. If you get reports of “low audio”, get closer to the microphone, or speak up. Many of the newer Chinese handheld radios are coming with somewhat low audio, and you may need to speak closely, clearly, and somewhat loudly in many cases. And get an external antenna for that HT if you plan on using it much in the mobile!

Courtesy: The repeater doesn’t belong to you, so you need to share it. Don’t feel obligated to interject comments into every conversation going on and if you do have a comment it should be related to the current topic! Likewise, don’t be surprised if someone breaks in to add some comments or information about what you’re talking about. If you need to break in, give your callsign. If you say “Break” or “comment”, the system is not likely to pick up fast enough so that everyone hears that single word. You may think you’re being ignored, but what really happened is that they did not hear you. Your callsign takes enough time that the system will pick up, and even if they don’t hear the whole call, they may pick up the last few letters and realize that someone is breaking in.

Policing the Air: If you hear someone you think is doing something wrong on the repeater, please, **DO NOT** confront or attack them. Send a message to eaarsofficers@eaars.com with date, time, calls and a brief description of the problem and the officers will investigate and deal with it. IF you think “they” are in violation then joining the conversation may also put you in violation. If it is a serious violation like “somebody taking requests and playing music on the club repeaters” then feel free to call *N7AM* day or night but, **PLEASE DO NOT** add to the problem by getting involved.

If you hear a new ham struggling, then explaining about the timers and waiting for the beep or pausing before they start talking, or offering general technical guidance *in a polite manner*, that’s great. (That means ask for a break, identify, and offer the assistance, not scream “wait for the beep” anonymously, *that is a violation*). Elmer to your hearts content. Most of the new users will appreciate it. If they tell you they don’t want to hear it then leave them alone!

Doubling: This happens when two people talk at the same time. What will happen is either that the audio will mix, and you hear both people, but can’t understand either one, or you will hear some interference that makes it hard to understand either transmission. To prevent this, try to make sure it is your turn to talk, and when you turn it over, say the person’s name or callsign. “Over to you, Tom,” or “Go ahead, K7XXX.” If you say, “Pick it up, someone”, then you are asking for multiple people to transmit.

Identification: Give your callsign as mandated by the FCC, every ten minutes, or when you clear off. You don’t need your call each time you transmit, if the transmissions are short. And don’t overuse phonetics for your name or callsign. If your name is Mark, people probably get that. You don’t have to say, “name is Mark, Mary, Adam, Roger, Kilowatt”, unless the people aren’t getting it right. You also don’t have to say, “K7XXX for identification purposes” or “K7XXX for ID”. What else would it be for?

Jammers: Occasionally there are unidentified people who will try to interfere with ongoing communications, play music, or hurl insults or profanity. **DON’T ACKNOWLEDGE THE JAMMER!** Carry on as normal, or clear off. The jammer is there to get a reaction from the users. You play into his game when you talk about him, challenge him, try to reason with him, or argue with him. **DON’T DO IT!** It is never appropriate to talk about jammers on the air. If it is recurrent or chronic, the control operators will take appropriate action. In most cases, control ops will do nothing, since it is the intent of the jammer to disrupt communications, and shutting down a repeater does just that. If you have the capability to monitor the input of the repeater, you can try that to see if you hear him. But don’t announce it over the radio, just log where you were and how strong the signal was on the input channel. Jammers have existed since the advent of ham radio, over 100 years ago. So, nothing new.

Nets: The EAARS network has several nets that meet regularly, at specified times. These nets are for some specific purpose, some are for general check in, others are for traffic handling. Although the nets do not have absolute priority, it is good practice to relinquish the repeater system if you are using it when the net is ready to start. You can finish your conversation when the net is through. If you are conducting emergency or priority traffic, the net will stand by for you.

IRLP and Echolink: The system has connection to internet based amateur radio linking. Another document on the EAARS website gives instructions on how to use this, and the protocols and procedures involved. If you use these connections, remember that you are tying up a large network, so keep your conversations succinct. Be courteous to other users. If you hear someone using these connections, please be courteous to them.

Making a Contact: If you want to make a contact, simply announce your callsign and say that you are monitoring or listening. You don’t need to repeat it several times. If someone wants to talk to you, they will give you a call. If you are listening to an interesting ongoing conversation, you can call one of the parties after they have cleared off. That’s a good way for newer hams to meet new friends. People will almost always respond to a direct call if they have the time. If you have a new radio setup or installation, you can ask for a signal report. Usually someone will respond. But don’t make a habit of it. That should be reserved for changes or new equipment. Listen first to how things run on the system, and emulate the good operators.

Topic Content: The EAARS network is an open repeater system with many users. Be respectful in your choice of topics. Controversial subjects are discouraged, as they tend to cause divisiveness. Do not engage in on air arguments with other amateurs, it serves no useful purpose. Do not let your emotions rule your words, think twice and speak once.

Support: EAARS is an open membership club, and sponsors all of the repeaters on the network. There is considerable cost involved with purchase, installation, maintenance, and ongoing services. If you use the system frequently, please join to support the system. The dues are only \$24 a year, so it shouldn’t be a burden on anyone. No one will be asked to leave, or refrain from using the repeater simply because they are not a member. If you hear a new user on the system frequently, encourage them to join the club and point them to our website.

www.eaars.com

Changes and additions are in RED



HAM RADIO IN THE DESERT!

Saturday, October 17, 9:00 AM to 3:00 PM
16000 Maricopa Road, Maricopa, AZ 85139



HOSTED BY THE

MARICOPA AMATEUR RADIO ASSOCIATION, INC.

Arizona Near Space Research Balloon Launch • Get on the Air Station • Ham Radio License Testing • ARRL QSL Card Checkers on Site • Radio Equipment Vendor Exhibits • Seminars • Hourly Drawings and Prizes • Special Event Station W7M



While you're enjoying the exhibits, seminars, and checking out the bargains, there's something to do for the entire family. Laser tag. Bowling. Movies. Arcade Game Center. Dining. Hotel accommodations.

Commercial Exhibitor/Vendor Spaces -\$10.00
for 2 spaces (additional space \$5.00 each).
Vendors Pre-register by e-mail: fest@copahams.org.
Setup is 5:00 AM the day of the event.



Maricopa Amateur Radio Association, Inc. is a 501(C)3 Non-profit, tax exempt organization.
M.A.R.A. is an ARRL affiliated club. Address business correspondence to:
MARA, PO Box 951, Maricopa, AZ 85139. www.copahams.org



American Radio Relay League

Amateur Radio Council of Arizona