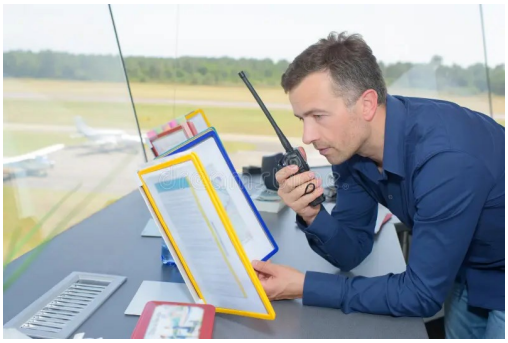
Microvolt

Monthly newsletter of the Utah Amateur Radio Club

July 2025

Contact!



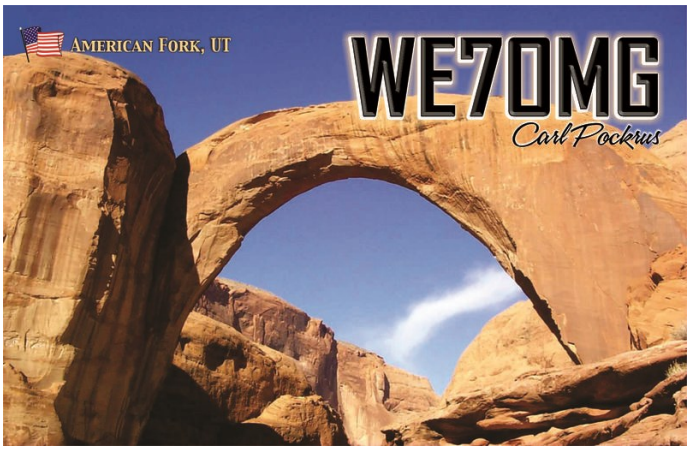
Is it true what they say, that *ham radio is a contact sport*? Well, if you ask a net participant, a Field Day attendee, or an avid contester, you might hear a thundering YES! So, what exactly is a *contact*? Basically, an amateur radio contact is any established communication between two parties by ham radio. Still, contact types and methods vary, and it might be fun to explore them. Furthermore, if a contact never got recorded, did it really take place, or does that even matter? Let's take a look into the world of contacting from several points of view and *you* be the judge!

Cover – Making contact

Amateur radio contains so many facets, programs, and activities that some find enjoyment in doing things that don't involve talking with another human being over the air, such as the technology behind radio, installing radio equipment, and volunteer examination administration. Yet, to most people looking broadly at ham radio, it would still seem that the entire point of radio is to communicate with another.

It's difficult to replace the exhilaration of hearing your own call sign repeated by a total stranger across the country or the other side of the ocean. Even starting out as a newly licensed operator, hearing an acknowledgement of your name or call sign by another ham is a thrill, knowing that your equipment is working and that you somehow got it to work well enough to get somebody's attention and a reply.

Making that first contact can be nerve-wracking to some who suffer from "mic fright" and don't know what to say, stumble over their words, or are in fear that they'll say something wrong, now that they have an officially issued government license. On one hand, getting used to talking on ham radio takes time and practice. On the other hand, it takes patience and understanding of the newer folks for those of us who have done it a few times. For some, talking on the radio might come naturally, but for most it does not. And after you make that first contact, your contact can give you a First Contact Award.



If you're one of those who have a difficult time communicating verbally with others, because maybe you have a speech impediment, or other disability, you can still enjoy ham radio by contacting using FT8, PSK31, Winlink, or other digital methods for example. These operating modes do not require your voice, but do require a connection between your computer and your radio, often through a sound card. Some modern transceivers have built-in sound cards that connect to your computer by a USB cable, where older radios can be adapted for digital work by inexpensive external devices.

No matter how you make the contact, another thrill is to receive a *QSL card* in the mail from the operator whom you've contacted. While not required by either party, a QSL ("acknowledgement" or "confirmation") card is a postcard that demonstrates the contact in writing. Some hams ask for the cards, to build their card collection, and a few have collected hundreds, even thousands of them for display.

Prior to the advent of digital communication, QSL cards were the primary method of confirming a contact, so operators tracked them carefully. Special "post offices" called bureaus were established to expedite the sending and receiving of the large volume of QSL cards. Some volunteers (card "checkers") were once installed to help acknowledge award confirmations by verifying contact authenticity, that today are confirmed largely by software.

So, just whom are you permitted to contact? You can make a contact with another ham radio operator through a mountaintop repeater, or a repeater that's installed on a satellite. You can make a contact with an astronaut on the ISS (International Space Station). You can contact a ham by bouncing your signal off the ionosphere or even the Moon. You can contact any other amateur in the world within the frequency and power privileges of your license. But using ham radio, be sure ***not*** to contact an unlicensed person, unless you're letting the person know how to get licensed.

Microvolt editorial staff

Editorial – Nets

When a person obtains an amateur radio license in this century, chances are pretty good that the very first contact the new amateur makes will be either on a local 2-meter repeater or on a voice ***net***. Doing so by an established net is an easy way to get started, because of the reduced pressure to perform or to say much at all. During a net, a participant has time to collect thoughts, recall the rules that govern the operations, and work up the courage to actually announce a call sign.

An amateur radio net (short for "network") is an organized on-air vocal meeting of ham radio operators. On such a gathering, one person is designated ***Net Control*** (short for Net Control Station or Net Control Operator) and opens the net, asking for participants to ***check in*** to the net by announcing their call signs. Nets are *not a necessary activity* in the amateur radio community, but can be interesting, fun, engaging, and educational.

Typically, each ham radio net possesses these four organization levels:

Host : Organization that sponsors the net, provides the frequency and/or repeater for the net, and assigns a Net Manager for one or more of their nets.

Net Manager : Person who defines the theme or purpose and format of each net. ensures each net is staffed by a Net Control Operator, and decides the days and times of the nets.

Net Control Operator : Licensed amateur who opens (starts) the net, optionally announces the net format (in a possible ***preamble***), and either asks for participant check-ins ("check-in net") or announces the names of past net participants from a roll ("roll-call net").

Participant : You, the licensed amateur who participates in a net by checking in or acknowledging your name and call sign during the roll call.

During a net, Net Control is in charge, and determines whether the net format is formal or casual. A formal net is typically a ***directed net***, in which participants are asked to follow guided rules regarding when and what to transmit, and to remain on the net until it's closed. Net Control often explains those during the preamble, which is the short introduction and theme (such as for new hams, ladies only, youth only, etc.) explanation paragraph at the net start.

During an incident or disaster, any person can start a *health and welfare net* and ask for people to check in, to coordinate assistance, shelter, medical, and other needs. Once in a while one operator is asked to communicate ***traffic***, which is a formalized message that follows the format of the NTS (National Traffic System), as dictated by ARRL. A net is a good place and time to request emergency help, because of the listening audience. In a non-emergency net, the term traffic otherwise refers to a regular message, such as an event announcement.

So, who can participate in a net? You can, if you fit the theme. Who can start a net? You can, if one isn't already designated for the frequency or repeater on which you intend to hold it, and you have permission of the repeater owner or trustee to do so. Can you listen in on a net to which you have no intention of checking in? Yes, and in fact you might find that any given net tends to attract more listeners than participants. And in spite of established net themes, no amateur holds any obligation to ever check into any net.

Anything to add? Email ***editor@utaharc.org***

Letters to the editor

Dear Editor:

I've looked and can't seem to find the answer to a simple question. When applying for a vanity plate, can I use any value for my number, or am I restricted to my geographical location of residence? For example, I reside in "7" land but want a "4" on my license.

Sharon in Millcreek

Dear Sharon:

First, when you refer to a "vanity plate" I presume you mean "personalized license plate" for registered vehicles in the state of Utah. For amateur radio plates, you can only apply for the call sign that appears on your FCC license. Second, you can request a "vanity call sign" that includes one and only one numeral, but any from Ø through 9.

Dear Editor:

My friend has two different antennas he uses for HF and 6 meters, and an antenna switch in his shack to switch between the two. Can a person do the same for two radios to a single antenna?

Gary in Salt Lake City

Dear Gary:

It's quite a common practice for people to connect two or more transceivers to a single antenna, but there are a couple of things you might want to keep in mind for that configuration. First, be sure you never transmit on more than one rig simultaneously, because the rig not selected will not be connected to an antenna. Second, we recommend purchasing an antenna switch that grounds the center to the shield of the non-selected connectors for static protection and port isolation.

Dear Editor:

Ever since I've learned about HF, I have been wanting to get into it, especially to talk to people around the world, which sounds amazing. So, I got my General license and started looking around for HF radios, and got severe sticker shock to find most of these things cost over a thousand dollars. I mean, I'm not made of money, and I'm probably not going to see much cash in my near future. So, what can I do to get into HF without breaking the bank?

Robert in Herriman

Dear Robert:

Honestly, there aren't many amateurs who are rich, so you're not alone. Turns out there are less-expensive ways to get into HF radio than purchasing the latest and greatest. One thing you can do is purchase a used transceiver from a reputable site, such as QRZ's Ham Radio Swap Meet. You can often find something for much less than new, but be sure to read this guide before venturing into that path. Another is to borrow an HF transceiver from a friend. Still another option is to listen on the Web SDR or install software that will let you do the same, but with your own antenna.

Dear Editor:

What's the down-side to upgrading to Extra? I mean, I'm aware of the advantages and privileges, but is there a drawback to becoming Extra Class?

Darrin in Salt Lake City

Dear Darrin:

One drawback that many newly upgraded Extras find is that people who become aware of your upgrade now suddenly expect you to know everything. Another is the possible feeling of self-justification to also "upgrade" your equipment. It's also possible that organization leaders (club, ARES, religious, CERT, etc.) will look increasingly to you for leadership in radio circles, and you might not be prepared to fill those shoes just yet.

*Send your questions to **editor@utaharc.org***

Club news

Keeping with tradition, Adam Stribling KK7NJJ led our June 2025 club meeting in a discussion on Field Day. He explained what it is (and isn't), when, and who can participate. While not technically a contest, Adam explained that we operate our stations in contest -like format, making and logging as many contacts as we could as a club in a 24-hour period to demonstrate emergency communication readiness.

Adam also helped us understand that Field Day is probably the premier means of getting on the air for those who have mic fright, or who have never had the opportunity to communicate on the HF bands. You can witness the way the operation takes place in real-time, to get an idea of what to expect and how you can participate yourself.

And as far as who can participate in Field Day operations, the answer is YOU. Whether or not you hold a license, you can get on the radio and make contacts anywhere to any station that'll receive your signal. For those unfamiliar with contest operation, the club will provide hands-on training, especially on satellite, FT8, and other available digital modes.

But we can't do all of these great Field Day activities without your help! We're hoping to get two more regular stations, plus a GOTA (get-on-the-air) station. The club will be holding a potluck dinner at the Field Day site. UARC will provide the main dish, but the rest is up to you. Please sign up to help out.

Finally, just come and have fun with us. After all, this is where the cool kids will hang out on the last weekend of June, in case you don't know where they went. We'll be in full operating and contacting mode from ***noon Saturday June 28 through noon Sunday June 29***. There's no cost to participate, and you can stay

as little or as long as you like. You're not obligated to do or bring anything. We'll have a port-a-potty plus hand-washing station available.

You can see the video presentation here. You can also view past club meeting presentations on our YouTube channel.

(Photos courtesy James Bennett KK7AVS, et al)

UARC 2025 Fall Potluck

Our 2025 Spring Potluck was so successful that, by overwhelming demand, we plan to hold a Fall 2025 Potluck dinner on Thursday 11 September at the same location, the Salt Lake County Facilities Management Cafeteria, 2001 S State St, room S1-100. We're announcing this now, because some club members said that two months wasn't enough notice for the Spring Potluck. But wait, there's more. Yes, we've discovered that our members enjoy eating and socializing so much that we've decided to plan a third potluck dinner for this year, this one in time for the Holidays. This UARC Christmas Potluck will replace the December club meeting on Thursday 11 December 2025, to be held at a very secret location that will be revealed later.

For your information

Steak Fry 2025

Our annual fun get-together is planned for Saturday 19 July 2025 at the Spruces Campground, site GRP7 starting around 3:00 pm. (Spruces is approximately ten miles up Big Cottonwood Canyon.) Cost is $15 per person. Details are posted on our website.

Fall 2025 Potluck Dinner

The next club potluck dinner is 6:30 pm Thursday 11 September 2025 at the Salt Lake County Facilities Management Cafeteria, 2001 S Sate St.

UARC Homebrew Night

Many of you are not only inclined to building, fixing, or modifying your gear, but are also itching to show it off. Thursday 09 October 7:30 pm at the UofU Warnock Building is the time and place of our annual Homebrew Night for you to come and do just that.

License classes

Salt Lake:

General : Tuesdays 7:00 pm to 9:00 pm
147.160+ MHz (127.3 Hz tone)

Provo:

Technician : Saturday, 8:00 am to 1:00 pm
20 Sep
Visit **HamStudy.org/sessions** to register (free)
Provo Fire Station #2, 2737 N Canyon Rd
Email **nv7vham@gmail.com** for info

Orem:

Extra : 5 Tuesdays, 6:30 pm to 9:30 pm
15 Jul, 22 Jul, 29 Jul, 05 Aug, 12 Aug
Technician : 4 Tuesdays, 6:30 to 8:30 pm
Sep 16, Sep 23, Sep 30, Oct 07
Visit **psclass.orem.org** to register ($10)
Orem Traffic Training Room, 95 E Center St
HamStudy.org account required
Email **nojiratz@hotmail.com** for info

Eagle Mountain:

Technician : 5 Thursdays, 7 to 9 pm
Aug 14, Aug 21, Aug 28, Sep 11, Sep 18
Email **ki6oss6365@gmail.com** to register (free)
Eagle Mountain City Hall, 1650 Stagecoach Run

Exam sessions

Salt Lake County:

- Email Garth Wiscombe W7PS **w7ps@arrl.net**
  Jun 30, Jul 28, Aug 25, Sep 29, Oct 27, Nov 24
- Email Rick Morrison W7RIK **w7rik@arrl.net**

Utah County:

- Wed 16 Jul 7:00 pm : **Provo** : **signup**
- Wed 20 Aug 7:00 pm : **Provo** : **signup**
- Sat 20 Sep 10:00 am : **Eagle Mtn** : **signup**

Club repeaters

Farnsworth Peak : 146.620– MHz (no tone)
Scott Hill : 146.620– MHz (no tone)
Lake Mountain : 146.760– MHz (no tone)

SDRs and beacons

Northern Utah WebSDR : **sdrutah.org**
KK7AVS SDR : **k7xrd.club**
N7RIX SDR : **https://sdr.n7rix.com**
K7JL beacon 28.2493 MHz

HF remote and club transceiver stations

If you'd like to learn how to get started using the remote stations, visit the **HF Remotes link** on **the club website**:
https://user.xmission.com/~uarc/HFRemote.html

How you can help!

Reach out to the club leadership by sending an email to **uarc@xmission.com**. Also, add to this page by emailing **editor@utaharc.org**

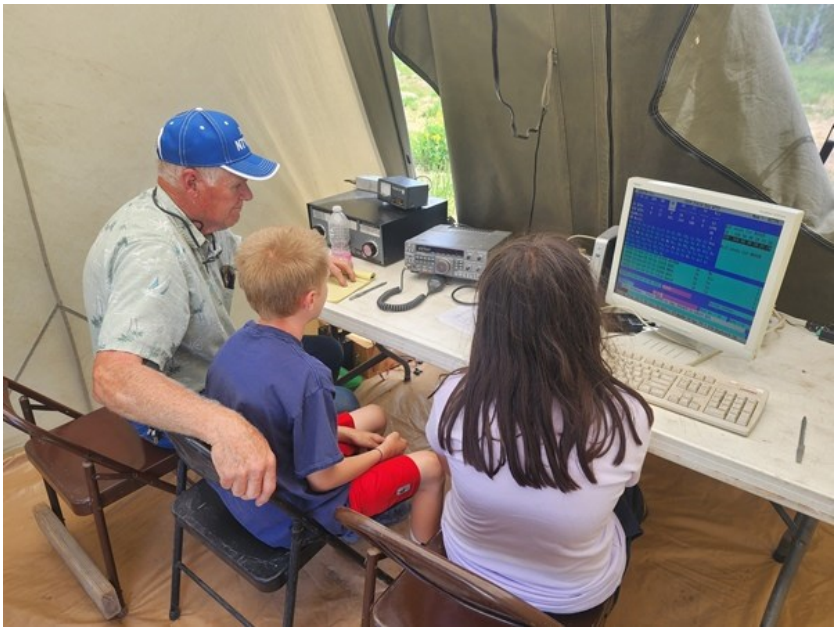
Spotlight – Don Rawlins N7YUQ

Don Rawlins N7YUQ has been in amateur radio for over 35 years. Randy Finch K7SL (SK), his neighbor who introduced and interested Don in ham radio, gave Don his first radio, a 2-meter crystal-controlled set. Eventually, Don obtained his no-code Technician license back when the FCC offered this alternative license to those who weren't especially interested in working CW on the low bands. This past May 2025, Don received his General license the same day Adam Stribling KK7NJJ received his, the two sitting next to each other during the exam session.

In 1998, club member Bruce Bergen KI7OM envisioned a repeater that could enhance the existing 146.620 repeater on Farnsworth Peak to reach operators east of the Wasatch range. After some amount of designing and back-and-forth discussions, he organized a work party to modify a repeater pair for that purpose. Don joined the work party alongside Bruce, Randy Finch, Chuck Johnson WA7JOS, John Clark N7SFN, and a few others on the Scott Hill repeater, helping with the wiring and the antennas. On another day, Don also helped Randy with the 146.760 repeater on Lake Mountain in Utah County.

A professional electrician, Don worked for GSL electronics for 18 years, and then for Crestwoods another 6 years before starting his own contracting business. He has worked on radio and TV stations, as well as a database center. One day Randy asked Don for help solving problems with KSL's AM broadcast radio station. Afterwards, engineers at KSL TV were so impressed with Don's work that they too asked for his expertise, and he eventually helped them set up the equipment for the 2002 Winter Olympics. In 2018, while working for Bonneville Satellite and AMZ Transmitter, Don went through ten states connecting new transmitters in ten days. Don says today he's retired, but that if they ever need him, he's ready to help.

In summer 2024 Don attended the UARC Field Day for the first time. He arrived Tuesday because he wanted to secure the club spot. Don's two grandsons attended with him, and one of the boys took pictures of the event for James Bennett KK7AVS. That Saturday night, Sylvia Bernert K7KQY logged while Don worked 20 meters from 10 pm until Sunday after 5 am. He was one of the last to leave on Sunday after helping to tear down equipment and clean up the site. Don tells us he plans to return to Field Day again this year.



Don is married and has several children, whom he's trying to interest in the hobby. Besides amateur radio, Don enjoys fishing and playing with the grandkids. He is now working on building a ham shack in the basement of his house, so he can have all of his ham equipment in one place. Now that he has his General Class license, he's looking to get an HF rig.

Good luck with all you do, Don!

– 73 from Linda N7HVF

Tech corner – How to work a satellite

Now that you've had the chance to build a directional satellite antenna of your own, let's put that device to good use. But before you point that thing skyward in hopes of making a contact, there are a few things you need to know.

It's helpful to learn your major grid square in advance. If you live in Utah County, Salt Lake County, Wasatch County, or Summit County, your major grid square is "DN40" for example. The three basic things you need to do to get started are 1) collect the target satellite info, 2) set up your radio, and 3) practice the pattern. Then, when the moment arrives, you'll be prepared to make the contact.

The mission

An amateur radio satellite is nothing more than a repeater station in space. What you're trying to accomplish is to make a contact with any other ham on Earth through that satellite repeater. You only have a few minutes as it passes over, and potentially several others are also waiting to make a similar contact.

Gather the satellite info

Probably the first thing you should do is pick a satellite. There are a number of active amateur satellites orbiting the Earth, but the three most popular are SO-50, AO-91, and AO-92. Let's use ***SO-50*** for this example, since it's possibly the simplest to demonstrate.

Next, download and install the HeavensAbove app. Heavens-Above is not the only satellite software available, but it's one of the best, IMO. Create a login (so it'll keep track of your location), then select Amateur Satellites–All Passes. Search or scroll down to SO-50. Notice that the "Downlink" is ***436.795 MHz*** and the "Uplink" is ***145.850 MHz***. Click Passes and select "all" passes. Pick a date and time that's most suitable to you. All times are local times, not UTC. At the time of this writing, it looks like SO-50 will pass at a very high elevation above the horizon on June 20, starting 9:01:29 am in the ***SSW***, peaking 9:06:11 am up ***63°*** in the ***ESE***, and ending 9:10:51 am in the ***NE***.

Set up your radio

The Baofeng UV-82 and Yaesu VX-8R are two of the best-suited dual-band, dual-watch HTs for satellite work, IMO. Many others are available so select one that's light-weight and is easy to operate with one hand. Program your radio as follows:

Chan	Tx Freq	Tone	Rx Freq
101	145.850	77.4	436.810
102	145.850	67.0	436.810
103	145.850	67.0	436.805
104	145.850	67.0	436.800
105	145.850	67.0	436.795
106	145.850	67.0	436.790
107	145.850	67.0	436.785
108	145.850	67.0	436.780

This will require you to set the "Frequency" of channels 101 and 102 to 436.810, each with a "–" offset of 290.960 MHz, then channel 103 to 436.805 with a "–" offset of 290.955, then channel 104 to 436.800 with a "–" offset of 290.950, etc.

Finally, make sure the squelch is turned off, or you won't be able to hear much.

What I personally do is use my Baofeng in Frequency (VFO) Mode, by setting the upper ("A") frequency to 145.850 MHz simplex and a T-CTCS of 67.0, then the lower ("B") frequency to 436.810 MHz, and at a

Tech corner – Work a satellite, cont'd

5.0K step. This is the "lazy" way to do it, because I a) rely on others to open the satellite repeater, which usually works, and I b) don't have to program these into my radio, but it works. Also, in the menu, set the TDR to ON, so that you can hear on "B" immediately after sending on "A".

Practice the pattern

Each pass of the satellite will take a different amount of time, due to its angle above the horizon. In this case, the satellite will move smoothly across the sky from 9:01:29 at the starting point, to 9:06:11 at the mid-point, to 9:10:51 at the final point. That's 9 minutes and 22 seconds of slow motion that'll test both your patience and your arm muscles.

Long before the starting point, practice making the sky sweep, to make sure you'll be following the correct satellite trajectory. It's very possible to get a visual on (see) your satellite, but often not likely. If you don't point your small-beamwidth antenna right at the satellite, your little radio might not detect its weak signal. And to ensure you're timing it right, let's divide the sweep into four equal sections.

Without your antenna, extend your arm and point to the SSW direction, about 10° above the horizon. That's the starting point. Next, move your arm to point at the ESE direction, about 63° above the horizon. This is the mid-point. Finally, move your arm to point at the NE direction, about 10° above the horizon. This is the final point. These three points enclose the two sky sections. Now, split up your timing by cutting the two sections in half, as follows:

Starting point: 0 minutes 0 seconds
First quarter point: 2 minutes 20 seconds
Mid-point: 4 minutes 40 seconds
Third quarter point: 7 minutes 0 seconds
Final point: 9 minutes 20 seconds

Now, try timing your pointing by moving your arm across the sky in this arc and at that pace. It's a little nerve-wracking, and it'll amaze you just how slowly two minutes crawls by. Next, try it again, this time holding your antenna. And then, try it again, but while holding both your antenna and your radio. Finally, do it once more, this time changing the lower (436.810) frequency down 5 kHz at each point, to keep up with the Doppler frequency shift of the satellite as it approaches and leaves:

Starting point: 436.805
First quarter point: 436.800
Mid-point: 436.795
Third-quarter point: 436.790
Final point: 436.785

You'll soon understand why avid satellite chasers use automatically controlled tracking equipment. Obviously, this takes a little coordination, and hence the practice. You can learn other tips on this page by AMSAT. And there's more.

Make the contact

When the starting point arrives, during each point in your sweep, you'll need to listen, because you'll hear people chattering. At an appropriate break, press the "A" PTT button, and if your call sign is KI7ABC and your major grid square is DN40, loudly say,

KILO-INDIA-SEVEN-ALFA-BRAVO-CHARLIE, DELTA-NOVEMBER-FOUR-ZERO

I placed the comma in the above for you to know when to pause slightly, so that you don't run together your call sign and major grid square. If you're being heard by, say, N6DLO, and his major grid square is DM69, you should hear something like

KILO-INDIA-SEVEN-ALFA-BRAVO-CHARLIE, this is NOVEMBER-SIX-DELTA-LIMA-OSCAR, DELTA-MIKE-SIX-NINER

In response, say,

ROGER-ROGER-N6DLO, thanks for DM69. SEVEN-THREE

That way, he'll also know that you heard *him*. Congratulations...you've just made your first satellite contact!

Noji Ratzlaff KNØJI

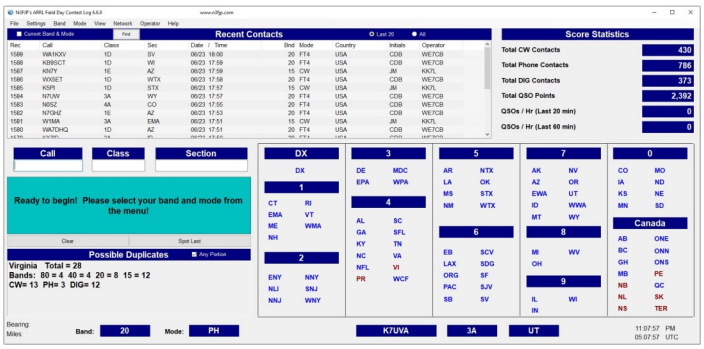
Strays – Logging

While it can be exciting to complete an actual two-way radio contact with another person, a fun activity to follow up is documenting the event. For decades, amateurs were required to log their contacts, but in late 1982 the FCC eliminated that requirement in the interest of modernization and deregulation. Today, even if not always necessary, ***logging contacts*** can be an entertaining way to keep track of them, and is in fact required to obtain most amateur radio awards.

In addition to logging a contact, an operator can also request ***confirmation*** of the contact by the person contacted. This means you can hold a QSO, log the exchange, then request an acknowledgement of the two-way QSO from the person you communicated with. The information you might want to exchange in the confirmation might include your call signs, your locations (countries, states, counties, or grid squares), the frequency or band, and the date and time of contact.

So, just how does an amateur go about logging a contact? Fortunately, a wide variety of logging software is available to help you not only easily record and maintain contacts, but to request online confirmation of them, also required for most awards. Here's a short list of some of the most popular logging software:

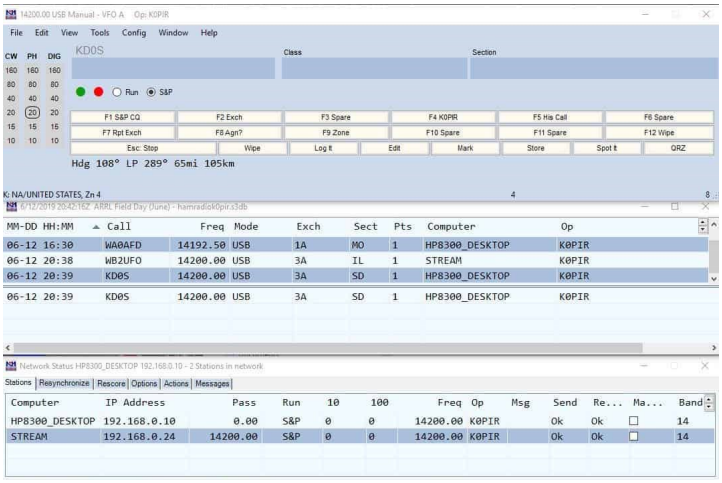
N3FJP



Possibly the world's most popular logging software for the serious contester, because of its robust capabilities, intuitive interface, and professional finish. The minimal data entry requirement makes it the most ideal software for rapid-fire contesting. It does require a one-time subscription, but the wealth of features and useful functions is well worth it.

N3FJP presents a user interface that's unique to each event or contest, tracks and displays your statistics in real time, has built-in networking support for multiple station coordination, alerts for duplicate entries, transceiver control, real-time world and contest mapping, automatic time synchronization, real-time data exchange, and presents you with the contest exchange. It can export results in all the popular file formats, including Cabrillo, LoTW, and plain text.

N1MM Logger+

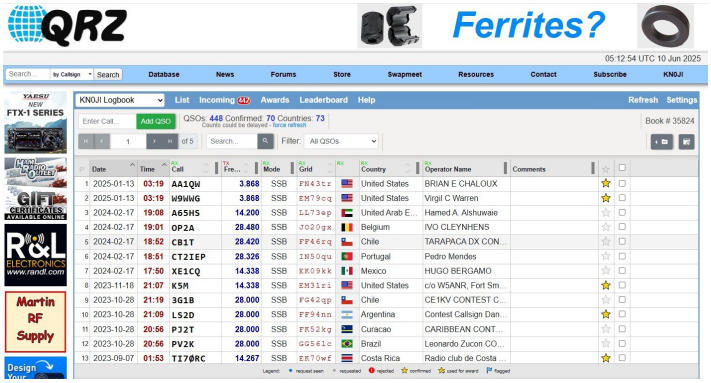


Possibly the world's most popular logging software for the serious contester, because of its robust capabilities, intuitive interface, and professional finish. The minimal data entry requirement makes it the most ideal software for rapid-fire contesting. It does not require a subscription, but the package contains a wealth of features and useful functions.

N1MM has built-in networking support for multiple station coordination, alerts for duplicate entries, transceiver control, rotator control, transverter support, DXpedition Mode, ESM Mode, automatic time synchronization, real-time data exchange, and automatic CW generation. It can export results in all the popular file formats, including Cabrillo, LoTW, and plain text.

Strays – Logging, cont'd

QRZ



The world's most popular logging software for any purpose, primarily because they provide every American ham their own free website. Along with the website, each ham has a ready-made way to log their first forty contacts. You'll need to pay for the $20 annual subscription to log more than the forty.

Another great benefit that lends to its popularity, QRZ is the only software that provides an online method of automatically displaying your contacts to the world. At the same time, you can peek at the contacts logged by others if you've subscribed to the service.

LoTW (Logbook of the World)

A mandatory logging interface for those awards that are promoted and sponsored by ARRL (American Radio Relay League), such as WAS, WAC, DXCC, VUCC, and WPX.

eQSL

More than just logging software, a free QSL card registration website that's a cost-effective alternative to snail mail, providing relatively rapid confirmations. Awards are given automatically by the internal tracker, so there's no need to keep track of or manually apply for them.

There are many good, free, or otherwise worthwhile logging software packages, including HRD (Ham Radio Deluxe), Log4OM (Log for Old Men), NetLogger, and HamRS. Nearly all of these run on Windows, and many operate on Linux and/or Mac. Many are also supported on Android and iOS phones. That being said, nearly every ham still use pen and paper for casual contact logging, then transfer the information to their favorite software later.

Awards

It's not every ham's dream to win awards; often, it's enough to make the contact. But it's also nice to have something to show for your effort, so several groups, such as QRZ, ARRL, and individual contests offer awards based upon confirmed contacts.

There's not enough room to list every ham radio contact award, but a few of the more sought-after ones include WAS (Worked All States), WAC (Worked All Continents), DXCC (Worked 100 Countries), and GRID² (Worked All Grid Squares). Some of these awards require the operator to register or pay a fee, so some are not given to you automatically upon the required confirmations.

Finally, keeping a log of contacts can be a satisfying way to look back on some memorable QSOs, especially with amateurs from distant lands. For those new to the craft, logging can also help you track your progress in your ham radio journey, as you watch the variety and locations of the contacts you've made grow through the years. It's another way to keep you motivated to make contacts, improve your equipment, and spend more money. ☺

Noji Ratzlaff KNØJI

Microvolt is the official publication of the Utah Amateur Radio Club, Inc. (UARC), 3815 S 1915 E, Salt Lake City, UT 84106, and is published monthly. Copying is allowed with proper credits to *Microvolt*, UARC, and authors. Online versions located at **https://user.xmission.com/~uarc/Microvolt**

We encourage you to submit original pictures (highest resolution), articles, software and hardware descriptions, appropriate humor, and responses to editorials. Email the content, pictures attached, to the editor at **editor@utaharc.org** by the 20th just prior to the target month.

The **Utah Amateur Radio Club** was organized under its present name in 1927, although its beginnings may date back as early as 1909. In 1928, it became affiliated with the American Radio Relay League (club #1602) and is a 501(c)(3) non-profit organization. It holds a club station license with the call sign W7SP, a memorial to Leonard "Zim" Zimmerman, amateur radio pioneer in the Salt Lake City area.

The club meets each month except July and August. The meetings are usually held on the second Thursday of the month at 7:30 PM in the University of Utah's Warnock Engineering Building, room 2230.

Club membership is open to anybody interested in amateur radio; a current license is not required. Dues are $20 per year. Send dues to club secretary James Bennett, 4960 W 5400 S, Kearns, Utah 84118. Email address changes to **kk7avs@gmail.com**

Tax-deductible monetary contributions are gladly accepted. Send directly to club treasurer Shawn Evans, 1338 S Foothill Dr, #265, Salt Lake City, Utah 84108-2321. For in-kind contributions, please contact **uarc@xmission.com** to make arrangements.

UARC maintains the 146.620– and 146.760– repeaters, which are administered by the UARC Repeater Committee. Direct comments and questions to any committee member. The 146.760– repeater is on IRLP node 3352.

Call the **UARC Ham Hotline** at **801-583-3002** for amateur radio information, including club, testing, meeting, and membership information. Leave a message, and we'll make an effort to return your call.

UARC 2025 Board

President: Marvin Match, KA7TPH
Exec. Vice President: Linda Reeder, N7HVF
Vice President: Bruce Fereday, KF7OZK
Secretary: James Bennett, KK7AVS
Treasurer: Shawn Evans, K9SLE
Microvolt Editor: Noji Ratzlaff, KNØJI
Asst. *Microvolt* Editor: Ricky Asper, AC7RA
Program Chair 1: Mike McAinsh, KI7MTI
Program Chair 2: Jeri Brummett, WJ3RI
Immediate Past President: Morris Farmer, AD7SR/SK

For-late breaking news listen to the UARC Information Net, Sundays at 8:30 pm on 146.620– or visit the announcement page.

We are grateful to the management of our internet service provider XMission, for the donation of our web service. For account information go to https://xmission.com/ or call 801-539-0852

EIN : **99-0407768**

Utah Business Registration : **575790-0140**