



# RADIO-ACTIVE!

March 13 2023, Volume 2, Issue 3



## Elmers

As many of us have embarked into the world of Ham radio we found the need to seek assistance. And so we are introduced to Elmers. An Elmer is an experienced ham radio operator who mentors beginners of the less experienced, advancing their knowledge in a personal way, usual with much hands-on radio operation and oversight. The term "Elmer" meaning someone who provides personal guidance and assistance to would-be hams--first appeared in QST in a March 1971 "How's DX" column by Rod Newkirk, W9BRD (now also VA3ZBB). Newkirk called them "the unsung fathers of Amateur Radio."

While there can be a variety in types of Elmers and mentorship styles, great Elmers share a few key traits, qualities, and characteristics to look for, including:



### 1. A Desire to Mentor and Share Knowledge

For someone to be an effective Elmer, they have to actually *want* to mentor other people. Great Elmers have a real desire to share their knowledge, experience, and insights—and use them to help other people grow.

There are plenty of operators who have the experience and skills to be a solid Elmer. However, they may not have a desire to leverage their experience and skills to help other operators.

### 2. Relevant Experience

An Elmer can be a huge support in getting from where you are in the hobby to where you want to go. However, sometimes in order to do that well, it's helpful if they have a similar background in their education or specific expertise.

You may want to find an Elmer who has achieved a goal that is important to you or who is working through a challenge you are facing. A great Elmer who has grappled with some of the same challenges you are facing in the hobby may be able to leverage their experiences and learnings to help you navigate some of those challenges.

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## Best Repeaters to monitor in a disaster

- K6BJ: 146.790 MHz, PL 94.8
- K6RMW/W: 147.945 MHz, PL 94.8,
- WR6AOK: 147.120 MHz, PL 94.8,
- WB6ECE linked system: 441.300 MHz, PL 100

## Events Save the Dates

- TBD: Scavenger Around Field Exercise (SAFE 2023)
- April 20—23, 2023: Lifetime Sea Otter Classic
- Saturday, April 29th: CERT Communication Exercise
- Sunday, April 30th: Big Sur Marathon
- Sunday, May 21, 2023: Strawberry Fields Forever

## Equipment available to loan

Santa Cruz Communications Support have two kits available for loaning to allow ham operators participate in a deployment when they have limited equipment. One kit is for a vehicle deployment and includes Mobile dual-band radio Icom IC-2730, mag mount antenna, battery and kneeboard. The other kit is for stationary outdoor deployments and includes the vehicle kit with additional supplies of a tripod antenna, lighting, and pop-up. (See article later in newsletter describing a testing experience)



The 2023 Lifetime Sea Otter Classic will be held on April 20-23, 2023. Help from amateur radio operators has been a vital resource for communication in the Fort Ord National Monument backcountry. The Lifetime Sea Otter Classic attracts thousands of athletes and spectators and is now regarded as the world's premiere cycling festival. The areas where we assist have little or no cellular or repeater coverage. This year help will be needed for the following times (times and details are subject to change):

- ▶ Thursday 4/20 - Enduro Support - Morning through mid afternoon
- ▶ Friday 4/21 - Back Country Support - MTB Gravilla Backcountry Radio - Very Early Morning to Mid Afternoon.
- ▶ Saturday 4/22 - Back Country Support - MTB Fuego Backcountry Radio - Very Early Morning to Late Afternoon.
- ▶ Sunday 4/23 - Back Country Support - MTB Fuego Backcountry Radio, and Robles Tour - Very Early Morning to Late Afternoon

Volunteers receive a volunteer T-Shirt, a pass to the Sea Otter Classic Festival (a \$70 value), and a lunch. Camping is available directly from the event (<https://www.seaotterclassic.com/camping/> - subject to availability and sells out quickly - some campgrounds are already sold out) or we have the option of camping for no charge in the Laguna Seca paddock.

Ham radio operators will be primarily working radios including ham radios and/or commercial/public safety radios (i.e. You may be asked to coordinate on a public safety frequency to guide in an ambulance while the medic provides care). We'll always try to

## Volunteers still needed!

pair experienced hams with new hams as needed.

To sign up please do the following:

1. <https://tinyurl.com/soc2023hro> or if this doesn't work for you, feel free to just reply to [takeuchi@sbcares.org](mailto:takeuchi@sbcares.org) via e-mail.
2. Updates will be available at <http://sbcara.org/otter> or <https://sbcara.groups.io/g/soc> and sign up for our email system so you can get updates.
3. <https://sea-otter-classic.volunteerlocal.com/volunteer/?id=68024> and in the password field, enter the word "Radio" (without quotes) do not enter anything else on the page and click on "Submit". The page will update with the Amateur Radio shifts. Click on the check box to click on if you're available and interested in that volunteer activity. All the events are for the backcountry at Fort Ord. For "Group – Organization Name" please select "San Benito Amateur Radio Association". You can fill out your information. Under "Is anyone volunteering with you" please enter "None". We need a separate submission for each volunteer. Sign the disclaimer by clicking the check box and entering your name and submit. You'll receive an email from Jeff Lindenthal to confirm your registration.

LIFE TIME  
SEA OTTER CLASSIC

# Education opportunity

## Auxiliary Communications (AUXCOMM) Training

### AUXCOMM Training Details

- ▶ **When:** August 12 & 13, Time TBA (20 hours of instruction)
- ▶ **Where:** Santa Cruz County EOC, 5200 Soquel Ave, 2nd Floor
- ▶ **Please fill out this form:** <https://forms.gle/4AFZsNn2mU9u3hgS6>
- ▶ **Submit IS certificates** (if not already done) [EOC.ARES@santacruzcounty.us](mailto:EOC.ARES@santacruzcounty.us)



The Department of Homeland Security National Incident Management System (NIMS) compliant program adopted AUXCOMM for all auxiliary emergency/public service communications within most states. AUXCOMM encompasses amateur radio, RACES, CERT Team communications, citizens band, and other non-public safety communications services.

While AUXCOMM stands for Auxiliary Communications, it is considered a Primary Emergency Communications asset and is overseen by qualified amateur radio personnel. Some state AUXCOMMs are tasked with establishing county AUXCOMM units led by appointed and qualified volunteer AUXCOMM Coordinators. The AUXCOMM program can replace RACES and the ARES programs within a state.

The SF Bay Area Auxiliary Communications Group has arranged an AUXCOMM training locally at no cost to the students. *Santa Cruz operators will be given priority and remaining seats filled with other county until 25 students.* Register early!

#### Offering Overview:

This class is designed for auxiliary communicators and groups who volunteer to provide backup radio communications support to public safety agencies. Typically, this includes amateur radio and Radio Emergency Associated Communications Team (REACT) communicators and other types of volunteer communicators.

This course focuses on auxiliary communications interoperability, the relationship between the COML and the volunteer, emergency operations center (EOC) etiquette, on-the-air etiquette, Federal Communications Commission (FCC) rules and regulations, auxiliary communications training and planning, and emergency communications deployment. It is intended to supplement and standardize an operator's experience and knowledge of emergency amateur radio communications in a public safety context.

#### Prerequisites for attendance are:

- ▶ Completion of [IS-100.b](#), [IS-200.b](#), [IS-700.a](#), and [IS-800.b](#) prior to the workshop **Email copy of Certificates to [EOC.ARES@santacruzcounty.us](mailto:EOC.ARES@santacruzcounty.us)**
- ▶ An active FCC amateur radio license (Novice, Technician, General, Advanced and Extra)
- ▶ Past experience in auxiliary communications
- ▶ An Affiliation with a Public Safety Agency (Santa Cruz County OR<sup>3</sup>)
- ▶ A desire to work with COMLs in a NIMS/ICS environment

## Hours Corner

In February operators logged 654 volunteer hours. Keep up all the great work and thank you for volunteering. Those who enter hours are eligible for the month drawing of a fabulous prize. Please remember to enter your hours on the form on <https://xczcomm.com/index.php/hours-reporting/>

## And the winner is...

We collect volunteer hours from our membership for the following reasons:

- ▶ On-going training by ARES volunteers demonstrates to county public safety managers that our members will be ready when called upon.
- ▶ Some state and federal grants require matching funds from local government. Documented volunteer hours may fulfill this requirement.
- ▶ We track member participation as a measure of ARES readiness.

Any hours one spends operating or upgrading their station counts, as does participation in our meetings, nets, exercises, and deployments.

The winner of the monthly drawing has a choice from these fine prizes:

- ▶ BTEch MURS-V1 HT, new in box. This is the MURS radio recommended for CERT members.
- ▶ Weller WLC-100 solder station. Used, in good condition.
- ▶ Anderson PowerPole 4-way power splitter.
- ▶ Baofeng UV-82 2m-70cm HT, new in box.
- ▶ Duracell DURA12-10F2 10 amp-hour AGM rechargeable battery
- ▶ BTEch NA-771 dual band whip antenna
- ▶ Assorted handy padded equipment bags
- ▶ ARRL Radio Amateur's Handbook, 1st Edition, 1926, signed by F.A. Handy (reprint)

**John, NS6K** was February's winner. Congratulations John!

## Resources

- Website: <https://xczcomm.com/>
- Reporting volunteer hours: <https://xczcomm.com/index.php/hours-reporting/>
- Upcoming events: <https://xczcomm.com/index.php/calendar-of-events/>
- Facebook page: <https://www.facebook.com/ARES-of-Santa-Cruz-County-Ca-296232310799866>
- Facebook group: <https://www.facebook.com/groups/431308973875528>
- PIO Articles: <https://arrlsantaclaravalley.org/news/> or <https://xczcomm.com/index.php/news/>
- XCZ Comm You Tube: <https://www.youtube.com/channel/UChZH8TU5gh4SqHTPXSWolPA>
- Submitting deployment documents: send in PDF form to [EOC.ARES@santacruzcounty.us](mailto:EOC.ARES@santacruzcounty.us) and your appropriate EC (Bob: [KO6XX@slvares.org](mailto:KO6XX@slvares.org))
- Submitting personal information such as DSW application, personal data update, education certificates: email [K6PDL@ARRL.net](mailto:K6PDL@ARRL.net), [KM6SV@SLVARES.org](mailto:KM6SV@SLVARES.org), and [EOC.ARES@santacruzcounty.us](mailto:EOC.ARES@santacruzcounty.us),

## Photo reminders

Next time you participate in a radio related activity, take a picture or two of yourself, your friends, your equipment, or your environment (preferably a combination of these factors) and send it to [KM6RMN@SLVARES.org](mailto:KM6RMN@SLVARES.org) and [KN6IAB@SLVARES.org](mailto:KN6IAB@SLVARES.org).

With your permission, Allison will use the material to make creative Facebook posts. Extra points for natural action poses, equipment still-life, or well-framed presentations. Even a funny or awkward moment is useful. If your shots involve other people, try to get permission or identifying information so Allison can make sure it is all right to use their appearance in her posts.



## Reminders

- ▶ AECs submit articles for newsletter by the Sunday before the meeting to [KM6URE@slvares.org](mailto:KM6URE@slvares.org)
- ▶ Net Control sign-ups will be taken during the monthly meeting. Everyone is encouraged to take this on this role.

# Communication Exercise Opportunity

Dawn, KM6RME

Inviting all ARES members to participate in a county wide communication exercise on Saturday April 29th.

This exercise will also involve county wide MURS neighborhood groups, CERT and other neighborhood emergency organizations.

ARES members can participate in three ways.

- ▶ Volunteer for Net control duties at the Emergency Operations Center. Operators must have a COMM 2 rating or higher. Each operator will be monitoring two VHF/UHF channels. At least two operators will be needed. There will be four repeaters utilized and monitored and this could get quite busy.
- ▶ Scribes for Net control will be needed. COMM 1 or above. At least two will be needed.
- ▶ ARES operator or team can travel to, and set up outside, a local public building (library, school, firehouse) and check in with net control.

The exercise will begin at 10:00 AM with MURS roll call welfare checks. CERT members of participating teams will be requested to report to their rally points. Starting at 11:00 AM, supporting CERT and neighborhood hams will be asked to report to ARES net control at the Emergency Operations Center on one of the four repeaters.

A message from OR3 will then be relayed back to the CERT and neighborhood hams by ARES net control. Some CERT messages may be specific to the following team exercise.

Hams will be asked to report to net control.

1. the number of MURS contacts
2. the number of volunteers at CERT rally points
3. the number of acknowledgements received to the message from OR3 after it has been relayed back to the MURS users.

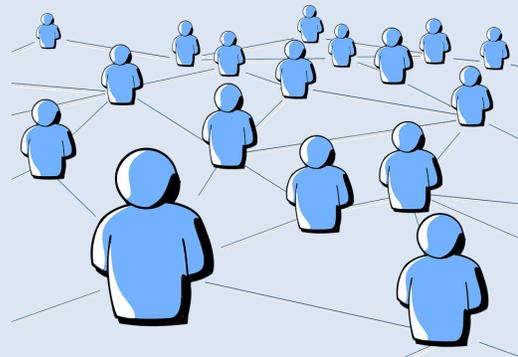
ARES members at Public buildings will be asked to check into Net control at or after 11:00 AM on one of the four repeaters. They will be asked to report.

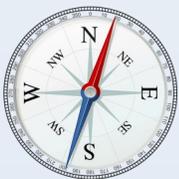
1. The type of radio they are using.
2. The type of antenna they are using.
3. The number of cars it would be possible to park at that location.

They will be given the message from OR3 and will need to acknowledge it. Some locations present significant communications challenges.

All reporting is expected to be completed somewhere around noon. Hope you can participate to practice and demonstrate the capabilities of amateur radio in Santa Cruz.

Look for more information to come!





## How to Find your Maidenhead Grid Square

If you know your latitude and longitude  
Bill, AJ6CQ

### Why?

Why do you want to know your Maidenhead grid square? There are several reasons. The Maidenhead geographic designation is widely used by hams for all sorts of purposes including contesting, communicating location, calculating approximate distance, and others. FT8 (a digital sound card mode) uses it as a concise method of describing location.

My particular motivation for computing a grid designator was that I was away from home. I wanted to use Winlink, and the grid square is how Winlink Express looks up nearby repeaters. There are Internet sites that will do this, but I had no Internet access, and was a little too ignorant at the time to realize that Winlink's setup menu offers a lat/long to grid calculator. (That was a good thing, since it turns out that the calculator has a bug that I later discovered by manually computing some locations and comparing results.) I did, however, have my GPS coordinates. So I was stuck, because I didn't know how to convert from latitude and longitude to a grid locator. When I got home, I looked up the definition, and decided to write up the process for other highly intelligent hams nerds to use. The calculation is a little tedious, but not especially difficult otherwise. It can be done on a single sheet of paper using the arithmetic you learned in grade school. The sections that follow will give a fairly detailed description of the process, with some explanations. Then there's a fully worked example, and finally a short cheat sheet that will make sense once you've been through the other material.

### Why "Maidenhead?"

It's called the Maidenhead system because it was chosen as a standard by a working group of the International Amateur Radio Union meeting in the town of Maidenhead, UK.

### What Does It Look Like?

The grid designator looks like this: CM96bw. That happens to be my home location. It's six characters long (there are variations with more characters

tacked on for extra precision, but we won't go into that.) The first character ('C' in my example) designates longitude to within 20 degrees. The second character ('M') designates latitude, to within 10 degrees. The third and fourth characters refine this to within 2.0 degrees of longitude and 1.0 degree of latitude. The final two positions get you within 0.0833 degrees of longitude and 0.04167 degrees of latitude. A degree of latitude is approximately 69.4 miles, so multiplying by 0.04167 we get that the square is 2.9 miles from south to north. Degrees of longitude differ in length depending on latitude. At the equator they are also 69.4 miles, while at the north or south pole, they have zero size. At the latitude of Santa Cruz County (approximately 37 degrees north latitude) a degree of longitude is about 55.3 miles, so the grid square is  $55.3 \times 0.0833 = 4.6$  miles from east to west. Notice that although these things are often called squares, they are more nearly rectangular, not square at all.

### Latitude and Longitude

The grid calculations use values for latitude and longitude that are not quite the same as the standard ones. Ordinary latitude has its zero at the equator, and goes from 90 degrees south to 90 degrees north. Maidenhead puts zero latitude at the south pole and goes up to 180 degrees at the north pole. Also, instead of putting zero longitude at the Greenwich meridian, Maidenhead puts zero longitude at what is conventionally 180 degrees. Then it uses only positive values of longitude ranging from 0 to 360 as you move eastward, thus putting Greenwich at 180 degrees. Although it seems crazy, this system simplifies the work needed to calculate grid squares. By the way, they're not really squares. The regions are closer to being trapezoids, but only a real nerd detail-oriented person would worry about that. So here's how to do the latitude and longitude conversions:

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Converting Latitude And Longitude	
Rule	Example
If your longitude is West, subtract it from 180 degrees.	122.59807 West → 180 - 122.59807 = 57.40193
If your longitude is East, add 180 degrees.	83.45173 East → 83.45173 + 180 = 265.45173
If your longitude is exactly 180 degrees either East or West, set it to zero.	180 West → 0 180 East → 0
If your latitude is North, add 90 degrees.	35.98539 North → 35.98539 + 90 = 125.98539
If your latitude is South, subtract it from 90 degrees.	23.17362 South → 90 - 23.17362 = 66.82638

### The Locator Format

As we saw earlier, the grid locator consists of 6 characters. These alternate between longitude and latitude, starting with longitude. The first two characters give only a very coarse position, the next two refine, and the final two refine position even further. The first two positions are letters, the next two are digits, and the final two are letters again. My home location is CM96bw. The C, 9, and b are all longitude specifications while the M, 6, and w are latitude. Although the first two letters are capitals and the last two lower-case, this is just for readability, and it has no actual significance. There's no lower-case in CW, so you don't even have the option when using Morse Code. So how do these letters and digits get determined? We'll go through the process position by position.

We'll need to convert numbers to the corresponding letters while doing the conversion. The translation is pretty simple: 'A' is zero, 'B' is one, and so on. Here's a table so you don't have to count it out for yourself. We won't need the whole alphabet, so 'Y' and 'Z' aren't listed. Upper or lower case doesn't matter.

A ↔ 0	E ↔ 4	I ↔ 8	M ↔ 12	Q ↔ 16	U ↔ 20
B ↔ 1	F ↔ 5	J ↔ 9	N ↔ 13	R ↔ 17	V ↔ 21
C ↔ 2	G ↔ 6	K ↔ 10	O ↔ 14	S ↔ 18	W ↔ 22
D ↔ 3	H ↔ 7	L ↔ 11	P ↔ 15	T ↔ 19	X ↔ 23

And now, here are the rules, along with an example taken from Santa Cruz County. The K6BJ repeater is located, according to Google Maps, at latitude 36.993532 and longitude -121.996664. Note that a positive latitude is *north* and a negative longitude is *west*.

1. Longitude conversion: -121.996664 is negative, so it's a West longitude. Subtract 121.996664 from 180:

$$180 - 121.996664 = \mathbf{58.003336}$$

2. Latitude conversion: 36.993532 is a North latitude. Add 90 to 36.993532:

$$36.993532 + 90 = \mathbf{126.993532}$$

3. First position, coarse longitude. Divide the converted longitude figure (Step 1) by 20. Save both the whole number part and the part after the decimal point. You'll need it later. The whole number part will be a number somewhere from 0 to 17. We use the alphabet letters A through R, corresponding to 0 to 17. (Table above). Select the letter matching the whole number part. (Whole number part is in red **bold**, the part after the decimal is underlined. Both parts are needed.)

Example:  $58.003336 \div 20 = \mathbf{2.9001668}$  The '2' corresponds to letter 'C', and we'll use the '.9001668' later. So we now have the partial locator **C**\_\_\_\_\_.

4. Second position, coarse latitude. Divide the converted latitude figure (Step 2) by 10. Again you'll need the whole number part and the part after the decimal point. The whole number will be somewhere between 0 and 17 again. Select the corresponding letter in the range A through R as you did before.

Example:  $126.993532 \div 10 = \mathbf{12.6993532}$  The '12' corresponds to letter 'M', so we now have **CM**\_\_\_\_\_.

5. Third position, intermediate precision longitude. Multiply the saved after-the-decimal part of the answer (from step 1) by 10. The whole number part will be a digit between 0 and 9. That's what goes in the third position in the grid spec. Save the part after the decimal point for later.

Example:  $0.9001668 \times 10 = \mathbf{9.001668}$  The '9' is our next character in the locator, so it's now **CM9**\_\_\_\_\_.

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6. Fourth position, intermediate precision latitude. Multiply the saved after-the-decimal part (from step 2) by 10. The whole number part will be a digit between 0 and 9, and that's what goes in fourth position. Save the part after the decimal for later use.

Example:  $0.6993532 \times 10 = 6.993532$  So the next position is 6 and we have **CM96\_\_**.

7. Fifth position, refined longitude. Multiply the saved after-the-decimal part (from step 3) by 24. The answer will be a number between 0 and 23.99... Use the whole number part and the table to find the corresponding letter as you did in step 1, except that now the letter range is 'a' to 'x' corresponding to 0 to 23.

Example:  $0.001668 \times 24 = 0.040032$  '0' corresponds to letter 'a', and for this last longitude position, we don't need the part after the decimal. So we get **CM96a\_**.

8. Sixth position, refined latitude. Multiply the saved after-the-decimal part (from step 4) by 24, and look up the whole number part in the table to find the corresponding letter, as you did for longitude in step 5.

Example:  $0.993532 \times 24 = 23.8445768$  The '23' corresponds to 'x' and we have a final answer of **CM96ax**.

9. Check your work - if no errors, then you're done!

### Another Worked-out Example

Wikipedia gives the coordinates of Santa Cruz (actually some specific point in Santa Cruz) as latitude 36.97194 North and longitude 122.02639 West. So we start by doing the longitude conversion: longitude is West, so we subtract it from 180 degrees:  $180 - 122.02639 = 57.97361$ . Latitude is North, so we add 90 degrees to get  $36.97194 + 90 = 126.97194$ .

Now let's find the coarse longitude. That's just the whole number part of the converted longitude divided by 20. So we get  $57.97361/20 = 2.89868$ . And from the table, get C for the first position. Our partial grid spec is now **C-----**.

Coarse latitude is the converted latitude divided by 10, so that's  $126.97194/10$  or 12.697194. And from the table we find that our next letter is M. The grid spec is now **CM-----**.

Now we're ready to get intermediate longitude. The after-decimal part from coarse longitude is 0.89868. Multiply by 10 to get 8.9868. The digit 8 is the whole

number part, and it goes next. We now have **CM8----**.

For intermediate latitude we take the after-decimal part from coarse latitude, 0.697194, and multiply by 10 to get 6.97194. The whole number part is 6, so that's next. We now have **CM86--**.

Now for fine longitude. The after-decimal part from intermediate longitude was 0.9868. Multiply by 24 to get 23.6832. We just need the whole-number part, so we have 23, and from our table that's X. So now we have **CM86x-**. (Notice that we conventionally use lower-case letters in the last two positions.)

Finally, the last latitude character. The after-decimal part from intermediate latitude is 0.97194, and multiplying that by 24 gives us 23.32656. Again the 23 gives us an x, so the final result is **CM86xx**.

### Short Form Cheat Sheet

Convert to Maidenhead Longitude and Latitude

- Longitude: If West, subtract from 180. If East, add 180.
- Latitude: If North, add 90. If South, subtract from 90.

Locator has 1st, 3rd and 5th places for longitude; 2nd, 4th, and 6th for latitude.

Longitude digits:

- 1st position: Divide by 20, whole number yields corresponding letter.
- 3rd position: After-decimal from 1st place times 10. Whole number is the digit for 3rd position in the locator.
- 5th position: Take the after-decimal part from the previous step, multiply by 24. Whole number part yields the letter.

Latitude digits:

- 2nd position: Divide by 10, whole number yields corresponding letter.
- 4th position: Multiply after-decimal part from previous step by 10, use whole number as digit for 4th position in locator.
- 6th position: Multiply the after-decimal part from the previous step by 24. The whole number part yields the letter for the 6th position.

See next page for Non-decimal Latitude and Longitude discussion.

## What If You Have Non-Decimal

### Latitude and Longitude Coordinates

Historically, latitude and longitude were given not using decimal notation, but in terms of degrees, minutes, and seconds. This notation is still quite commonly used today, so it's useful to know how to convert degrees, minutes, and seconds to decimal degrees.

So what are these units?

- A degree is 1/360th of a circle. If you went from zero degrees longitude all the way around the earth and returned to zero degrees longitude, you would pass through 360 degrees of longitude.
- A minute is 1/60th of a degree,
- A second is 1/60 of a minute or 1/3600th of a degree.

Why all those 60ths? (And even 360 degrees = 60 times 6.) It goes back to ancient Babylon, where mathematicians liked the number 60 because it can be divided up in so many different ways. The notation for something like 17 degrees, 35 minutes, 11 seconds is 17° 35' 11". Often these days you'll see a hybrid notation with whole number degrees, and minutes specified as a number with decimal, such as 17° 35.183'.

So how do we get from these to purely decimal degrees?

- If you have seconds specified, divide the number of seconds by 60 and add it to the minutes to get a new value for minutes. If you just have minutes (with or without a decimal part) just go on to the next step.
- Divide the minutes by 60, and add to the degrees. That's it - final answer.

So in the example above, 17° 35' 11", we divide 11 by 60 to get  $11/60 = 0.183$ . Add this to the 35 minutes to get 35.183 minutes. At this point, we have decimal minutes. Divide by 60 to get  $35.183/60 = 0.58638$ . Add to the 17 degrees and we have 17.58638°. And we're done.

## Elmers (continued)

### 3. Great Listening and Communication Skills

Great Elmers know communication skills—including sharing ideas and actively listening—are crucial keys to effective mentoring. If you're overwhelmed, or stressed, or you need to vent, your Elmer should be able to actively listen and hold space. Also they should be able to deliver honest feedback in a way that feels encouraging, not discouraging.

### 4. Personality and Identity Fit

Personality fit is most important when searching for an Elmer. In fact, forcing a mentor relationship is one of the common mentor pitfalls. Research data also demonstrated that identity, including racial and ethnic identities, matter in mentorships as well.

### 5. A "When One Succeeds, We All Succeed" Attitude

Unfortunately, there always seem to be some people who view other people's success as a threat. The best Elmers are people who view success as an unlimited resource—and who believe that helping others succeed ultimately means more success for themselves as well.

### 6. Time and Availability

An Elmer may have the desire to mentor other operators, and they can have all the qualities needed to be a great Elmer. However, if they don't have the time, energy, or availability to be a mentor, they're not going to be the right Elmer for you right now. A great Elmer understands mentoring is an investment in another person—and if they wish to be a Elmer, they need to currently have the bandwidth to invest in the relationship.

This month's operator Spotlights include two celebrated Elmer operators —Cap, KE6AFE and Dan, N6RJX.

## Org. Positions

- DEC  
John / N6QX, jfgerhardt@gmail.com
- Assistant DEC  
Gary / K6PDL, K6PDL@arrl.net
- Assistant DEC and Deputy EC  
Karen / KM6SV, KM6SV@slvares.org
- Operations and Events  
Dan / N6RJX, N6RJX@slvares.org
- Webmaster  
Nate / KM6THA, KM6THA@gmail.com
- Administration  
Dawn / KM6RME, KM6RME@slvares.org
- Safety Officer  
Stephen / KM6NEP, KM6NEP@slvares.org
- Public Information officer  
Allison / KM6RMN, KM6RMN@slvares.org
- Net Manager  
Roberta / AJ6KN, AJ6KN@slvares.org
- EC Loma Prieta  
vacant
- EC Coastal and SLV  
vacant
- AEC-Antenna Specialist  
vacant
- AEC-CERT Liaison  
Liz / W6LTS, W6LTS@slvares.org
- AEC-Coastal  
vacant
- AEC-Education Coordinator  
Bill / AJ6CQ, wtyler@gmail.com
- AEC-Logistics  
{temp vacant}
- AEC- Meeting Trainer  
Jim / N6EWP, N6EWP@arrl.net
- AEC-MRC Liaison  
John / KN6DCA, drjohnr54@gmail.com
- AEC-New Member Liaison  
Alex / AJ6QY, AJ6QY@slvares.org
- AEC-Packet Radio /Digital  
Sebastian / KK6FBF, Sebastian@steinhauer.info  
Ryan / K16UAP, K16UAP@gmail.com
- AEC-Photographer  
Lisa / KN6IAB, KN6IAB@slvares.org
- AEC-Scribe  
JoMarie / KM6URE, KM6URE@slvares.org
- AEC-SLV Safety Officer  
Tom / KK6NMZ, KK6NMZ@slvares.org
- AEC-SLVEN Liaison  
vacant
- AEC-Video Production Team  
vacant

## Operator's Spotlight—Cap, KE6AFE



Cap, KE6AFE grew up many areas on both coasts including Pennsylvania, Connecticut, Rhode Island, Tennessee, Southern California before settling into Santa Cruz County. He is married and has two children and four grandchildren. His current hobbies and activities outside of ham radio include gardening, camping, and walking on the beach or among the redwoods. His favorite family times are the intergenerational Christmas meals. Cap attended Cabrillo Community College and was a Wildland Firefighter and CDF Fire Crew Captain. His work with CDF communications made him comfortable for the future using VHF FM voice and digital

operations. However, despite at age 7 knowing CW of 8 wpm, he did experience mic fright which delayed him getting his license. Cap accepted a challenge at age 43 into becoming a ham radio operator. In 1993, a co-worker and ham operator agreed to produce a needed straight key as a Christmas present for Cap's nephew, only if Cap would get his ticket (license) in return. There are several family members with their Ham radio license including little brother Jim, N6BIU (once active supporting of the K6BJ repeater), father, K3TPA, nephew, and uncle.

There was negligible local ARES activity when Cap joined the group. Upon stirring the pot, after CDF retirement, Cap was appointed as County ARES District Emergency Coordinator (DEC) and served as ARES DEC from 2004 to 2014 and as ACS/RACES Chief Radio Officer until John N6QX took over during the pandemic. Cap enjoys interpreting the VHF network topology while watching digipeated APRS packets scroll by in his terminal window. Because of living and working throughout Santa Cruz County since 1964 Cap has a unique knowledge of our area's topography. Cap's proudest moment was when he was able to first receive packets from the MIR space station on his dot-matrix printer! His current equipment includes FM VHF/UHF Scanners, Kenwood Th-D72A HT and Icom IC-2730A dual-band mobile rig in the living room with rooftop omni antennas. Two VHF FM 1200baud packet stations for APRS weather and IGate. Cap wants to improve on more routine chats on air and occupy more of the available airtime. He thinks the price is right. And plain fun. But he likes to support his favorite quote from <https://www.qcwa.org/amateur-code.htm> : The Radio Amateur is BALANCED; Radio is an avocation, never interfering with duties owed to family, job, school or community.

Cap can be frequently heard on many of the local repeaters and providing 'just in time' mentoring and coaching of the new or experienced operator. He is always gracious and kind guiding novices through the airwaves.



## Santa Cruz County ARES Purpose

- The Amateur Radio Emergency Service (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment with their local ARES leadership for communications duty in the public service when disaster strikes
- We are not fire fighters or police or sheriff's officers. We are volunteers who care about our communities by using our emergency communication skills.
- Before volunteering in an emergency we first take care of ourselves, our family, and our home.
- We value the every member's contributions, irrespective of license class, years of experience, or the price tag of equipment.

## Ham Radio's Motto

"When all else fails – ham radio works". That is because, when all the normal communication systems stop working, Ham Radio is still in operation, helping people, conveying messages, and sometimes, even saving lives.

## Operator's Spotlight—Dan, N6RJX



Dan, N6RJX, our designated ARES event coordinator, was raised in Covina, California. He moved to the Felton area in the 1980's to enjoy a greater variety of weather (he wanted more rain!). He is married to a fellow ham radio operator, Liz, W6LTS. Dan enjoys traveling, camping and has ventured into photography. Dan has recently retired from 32 years work in the Quality Department at Plantronics. Interestingly, Dan's favorite quote is "Failure is always an option" - Adam Savage. He is often surprised when he is reminded by life that with the

exception of his experiences, he is not unique.

There has been a lot of crossover in skills between ham radio and his career including MS based computer programs, project planning, and general knowledge of electronics. His hobbies have supported his work and the reverse is also true. He attributes a lot of his success in his employment from studying the ARRL Handbook. He states he can't remember a time that he wasn't interested in ham radio and radio in general, it always seemed magical. He still remembers the first time he heard an AM broadcast station in Pennsylvania on a table-top radio after attaching an external antenna. For various reasons it took him a long time to get licensed (1988) even though the first ARRL handbook he read was the 1965 edition. He has achieved his Amateur Extra and was often supporting new license testing as a VEC. He has been an instructor for many of the local Technician and General classes. After moving to what seems like the disaster center of the US, ARES seemed like a way to cope with the need for information and to help the community. He thinks the greatest value we as hams can provide to our served agencies is being able to transfer large amounts of data without the usual methods. Dan also is an active participant of the Community Emergency Response Team (CERT) and the San Lorenzo Valley Emergency Network (SLVEN).

Dan's favorite radio activity currently is playing around with Winlink and related apps. He frequent tries out many different aspects of the hobby at our events — crossband repeating and APRS are just a few. His proudest moment was his ability to help out with the CZU fires. It was the first time that he was able to use his training and knowledge in a mission critical application.

His goal this year for ARES is to have a successful public service event season and have at least one other person that can organize ham support for the events.

Dan has also volunteered his Ham radio time outside the county including the Baker to Vegas running race. The Baker to Vegas (B2V) law enforcement foot is a charity race covers over 120 miles starting in Baker, California and ending in Las Vegas. It takes over 650 radio volunteers to support the event.

Dan quietly and efficiently organizes several of the county's public service events for ARES. He also has mentored many hams into proficiency. Dan gives many hours of volunteer time to get 'er done and without complaint.

## Found on the Web

Allison, KM6RMN, Public Information Officer

As Storm-ageddon #2 soaks the region, several good web resources came to mind for the well-prepared ARES road warrior. Before putting your kit by the door and donning your DSW badge, check these sites for the latest weather-related information.

### National Weather Service (NOAA)

You'll want to see what the general weather conditions and hazards are in the region. NOAA is the site that will give you every possible angle on what lays ahead. When you land on the site, type in your town or zip code in the top-left corner. Besides reporting current weather and forecasts, you'll see alerts for hazardous conditions. Click on the hypertext to get detailed reports. Below the excellent forecast graphics is a detailed summary for the week, and then shortcuts to additional forecasts and tools.  
<https://forecast.weather.gov/>

#### NOAA location search box

Local forecast by  
"City, St" or ZIP code

Enter location ...

[Location Help](#)

Type	Example
City	Modesto, CA
ZIP code *	83204
County *	Valley County, MT
Lakes, Parks, Mountains, etc.	Lake Youngs, WA
	Lincoln Park, Los Angeles, CA
	Big Southern Butte, ID

\* Large areas, like counties and ZIP codes, are not recommended. The center of the area may be far from your location and the weather may be very different there.

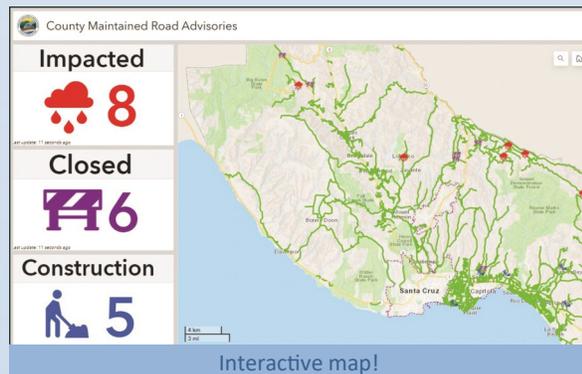
Multiple location queries available

### Caltrans Road conditions

Next you'll want to check out road conditions. Go the Caltrans quickmap site and click on the 511 regional sites button to get instant access to a map of Santa Cruz County with traffic and closure icons and a few more detailed reports for longer term conditions. For specific California highways, go to Caltrans roads and type in the highway or freeway number for all bulletins in effect.  
<https://roads.dot.ca.gov/>  
<https://cruz511.org/>  
<https://quickmap.dot.ca.gov/>

There's also a page called *Road Closure Experience* with an interactive map and road advisories. Clicking on the icons will render a thumbnail report of the nature of the obstruction or road conditions.

The rather long URL: [https://experience.arcgis.com/experience/09f637a4d84946edbb5aab283766c9de/?fbclid=IwAR1ROOVBpzVoPspDSe13sJw3ZB-Yxy-mIDN8gA-b\\_2kvlPt\\_VGqtbMjYc](https://experience.arcgis.com/experience/09f637a4d84946edbb5aab283766c9de/?fbclid=IwAR1ROOVBpzVoPspDSe13sJw3ZB-Yxy-mIDN8gA-b_2kvlPt_VGqtbMjYc)  
Shortened: <https://tinyurl.com/SCruzroads>



### Santa Cruz OR3

You have at least one more stop to make while assessing what's outside your door. What's it like for the boots on the ground? Santa Cruz Office of Response, Recovery and Resilience (OR3) has created a page that aggregates the very latest county agency social media communications, plus a directory of the Instagram, and Twitter, and Facebook pages of a variety of Santa Cruz County services.

Long URL:

[https://santacruzcounty.us/OR3/Response/LocalAgencySocialMedia.aspx?fbclid=IwAR2dzl\\_FiAYMPWw9TgnjRhXg0W7lcnzrYJqv-VcOQy8-7eFXFqK3USU7cs](https://santacruzcounty.us/OR3/Response/LocalAgencySocialMedia.aspx?fbclid=IwAR2dzl_FiAYMPWw9TgnjRhXg0W7lcnzrYJqv-VcOQy8-7eFXFqK3USU7cs)

Shortened: <https://tinyurl.com/OR3-Insta-Face-Tweet>

I've run out of room, but not out of pages to follow. Next month I'll cover Netcom and its referenced apps: Code Red and Zonehaven, which can both be downloaded through <https://www.scr911.org/>. If you want to get a head start, check out the page and download the apps if you haven't done so already.

If you know a cool website, podcast, YouTube series, or online tool, send me a heads-up at [KM6RMN@SLVARES.org](mailto:KM6RMN@SLVARES.org). I'll check it out and pass in on to the community.