

W6SFM

Samuel F. Morse Amateur Radio Club
(SFMARC) Sacramento, CA



SFM ARC Sacramento, CA - W6SFM ARRL Field Day 2017

W6SFM Field Day 2017 setup, Installation of the club's 4BTV antenna radials underway

We apologize to those who weren't able to be shown in the video. We still know and appreciate everything that you do for our club, and we thank you for it!

W6SFM Field Day 2017 Video has been released

The much awaited annual ARRL Field Day video has now been published to our W6SFM YouTube channel. To watch the video please go to the WWW.W6SFM.COM website and click on the "Media Clips & Pics" menu at the top of the page and then select the "Videos" category to watch it. This year's video once again highlights all of the activities that the club does both in preparation of the event, and throughout the event itself. Thank you to all of those members who were able to make it out with us.

W6SFM August, 2017 Newsletter

Solar Eclipse QSO Party

If you haven't yet heard, for the first time in nearly 40 years, people across the US will get the chance to experience a total Solar Eclipse. Although the path of the full eclipse will be slightly to the north of us here in the Sacramento Area, we can expect a predicted 80% black out of the sun. Along with this Solar Eclipse comes an excellent time to test out vary rarely experienced Day time DX conditions! On August 21st, 2017, beginning at 10:15 a.m. PDT, a total solar eclipse will sweep across the United States. The glorious sight of the fully eclipsed Sun will be visible along a 70-mile-wide path arching from Oregon to South Carolina. Millions of people are expected to travel to this "path of totality" to watch as the moon entirely covers the face of the Sun. Along with this great event comes another, the Solar Eclipse QSO Party. This event is not only a way to celebrate the total Eclipse, but also an on-air experiment. Keep in mind, the next total Eclipse across the US won't occur until August 12th of 2045, so perhaps this is a good reason for Hams across the country to take the day off of work! (Continued Page 2)

On-Air/On-Line QNI Report

Secretary Chris, AI6U reports another impressive number of **40** QNI on-air check-ins and **14** On-line "Live Feed" viewers. This month on-air check-in numbers held steady with last month's, showing us that we're keeping a good turnout of participants. The summer months have shown pretty good Band conditions. Member Rick, N6IET from Los Angeles has been reporting in with his new, and reduced sized balcony rail mounted vertical antenna, with signals as high as 599 but no lower than 559. In addition, the club is seeing more "guest" check-ins from those coming across the net, or having heard about it from one of our active members.

The **Net Control Station** suggests that those attending the on-air nets please try to keep their speeds to around 13 WPM to allow our past CW class students and others new to CW to pick up on everything being sent. Please keep those on-air check-ins coming! We enjoy hearing about member's current happenings. On-air Net Meetings offer a way for club members to get together between in-person meetings and events. Especially for those out of town. Please refer to our W6SFM [homepage](#) for on-air meeting times and location.

In-Person Meeting Attendance

The W6SFM Samuel F. Morse ARC club welcomed **10** members and **4** guests to our in-person in-person monthly meeting. For his second month in a row, we were joined by our potential next member, Oleg who holds a foreign commercial radio license, but is not yet licensed for Amateur radio in the US. Perhaps this is something that the club can help Oleg out with? We also welcomed Guests Sylvia, KS6WTF and Tom, W6BS who attended the meeting in an effort to gain more knowledge on the WSPR Net system that Member Carol, KP4MD presented to the club. Be sure to invite any of your HAM and potential HAM radio friends to our in-person meetings. They do not need to be a member of the SFM ARC or a licensed HAM to enjoy our in-person meetings with us.

W6SFM Request

Although we're still in the Summer months, we've noticed that we're having a reduced number of local members joining us for our in-person meetings. The club would encourage you to find an opportunity to join us at upcoming in-person meeting(s). We've missed catching up with you. Please help to keep our numbers up at our in-

person meetings. come on out and join us if you can.

W6SFM Live Feed Report



Thank you to member David, K6CIM who held down the fort with our all new YouTube Live, Live Feed broadcast while our regular webmaster Mike, N6MQL was out of town on a much-needed vacation. David did an excellent job broadcasting the On-Air Net meetings for the last 2 Tuesday evenings in the month of July. Copies of those on-air net meetings (along with in-person meeting) recordings can be found in our NEW videos section of the W6SFM Website. (discussed later in this newsletter) Feel free to use these recorded and archived videos for CW Practice, or just to review the on-air net meetings when you are unable to watch them LIVE while we are on-air. Each Tuesday evening the SFM ARC broadcasts live (via YouTube live) The On-Air net meeting, both with on-air audio, and a CW to plain English text decoder. Please expect a delay of up to 10 seconds between on-air transmission and our broadcast on-line.

Solar Eclipse QSO Party

(continued from front page)

The objective of the Solar Eclipse QSO Party, or SEQP as it's being called, is to flood the airwaves with contacts all measured by the automated receiver networks of the Reverse Beacon Network (found on the club's "Helpful Links" webpage), PSKReporter, and WSPRNet

(<http://wspnnet.org/drupal/>). When those observations are combined with the logs from individual stations participating in the SEQP, the result will be one of the largest ionospheric experiments ever performed. In order to achieve a good base for ionospheric conditions the SEQP will start well before the eclipse begins on the western coast of Oregon. Hams should begin making contacts right away to establish what the bands are like before the shadow starts digging a trench through the ionization layers. As the penumbra starts cutting into the solar disc, operate on lots of bands, or focus on a favorite. Even if the higher bands aren't too lively, be sure to cast some CQ's there, because the network receivers will be looking for signals, and you can get bonus points just for being spotted! Now that's a first. Hi Hi.

Be sure you have the latest version of your logging

software and that it can accept a REAL signal report (RST) AND grid locator number. Many VHF+ contest software's can do this. If you're really interested and don't have a copy of software that works please contact Mike, N6MQL. He may be able to provide you with something that will work for this event.

The SEQP features a long list of bonuses similar to Field Day. Some of them are:

- **Operate during totality at your location: 100pts**
- **Operate outdoors: 100pts**
- **Operate in a public place: 100pts**
- **Provide detailed station information: 50pts each: antenna info, HFTA terrain profile, ground conductivity, and station ERPD on each band**
- **Operate a wide-band automated receiver at your station: 50pts**
- **One point for being spotted in a grid outside your own during each hour, and on each band and mode.**

After creating data, be sure to submit your log as described in the SEQP rules found at www.hamsci.org/seqp. A group of researchers at

Virginia Tech will process the data from each log and from all of the automated receiving networks mentioned at the beginning of this article. This will create the largest set of measurements from any armature event EVER!

I know I really don't have to tell you guys, but just in case, remember, don't look directly at the sun or through any magnifying device, even though the moon is covering it. Even looking at one single area of the 20% not covered can cause SERIOUS retinal burn and cost you your vision. Some safe ways to watch the eclipse can be found at www.skyandtelescope.com/astronomy-news/observing-news/view-the-sun-safely

Remember, the Eclipse won't just affect the MF and HF bands, but also the VLF bands too! So for those of you testing out the 630 meter band (472 – 479 KHz) this could be an excellent opportunity to see what's going on down there during the solar event.

Thank you to Member, Carol, KP4MD for providing much of this information during this months in-person meeting WSPR Net presentation. More on that presentation can be found later in this newsletter.

W6SFM to provide License Exams?

One thing that a select few Sacramento Amateur Radio Clubs have offered in the past is the ability to provide Amateur Radio License Exams (VEC Tests). One thing that has been noted in the last year and a half is an increasing amount of non-licensed students signing up for the W6SFM CW Beginners Class. Also, we have seen in the last few months some guests attending our in-person meetings and Field Day event who are interested in becoming HAMs but are not yet licensed.

Currently there are 2 groups that hold regular HAM Radio license exams in our general area. The first is an Un-sponsored group who operates out of the Carmichael Elks Lodge each month. The other is the SFARC group in Granite Bay who also test once per-month.

One thing that those groups do not offer is an emphasis on Morse Code (CW) and the world of HF Radio. It would seem that they may be more focused on getting new HAMs licensed to operate on the VHF (2 meter) Band. This seems evident by the fact they run a "Ham Cram" type test where the student studies for about 1 or 2 hours before a Tech class examine, and then goes into the room and regurgitates all the information just learned in

the class room. Although there is nothing wrong with that, and any newly licensed Amateur is a good amateur, it has been one of the goals of this club to see more operators taking to the HF bands using Morse Code. Thus, the reason we teach a CW class.

In order to achieve this goal, it is important that those unlicensed operators have not only a club to join, but also a place to take an exam where members can Elmer those examinees to move in the direction most W6SFM Members prescribe to, CW and HF in general.

This is not to say that the W6SFM should conduct monthly scheduled VE License tests, but rather make them available to those who attend and complete our CW course, or attend our meetings and events and show a proclivity to HF and CW operations.

I would like to encourage ALL of the local SFM ARC Members to contact the club Administrator via our Email "Contact Us" link on the W6SFM Website to let us know of your interest. The ARRL offers a FREE open book VE test where members can become authorized by the FCC to provide these license examinations to the general public. There are of course some regulations. For example, you must be a Radio Extra to test

someone at an Extra Level and You must hold at least a General Class License to participate.

If you meet this requirement, hold a certification for the VEC program, or would like to get certified, the club will provide you with all the information you need. Not only will this new program help the Ham Community, but it will also help to preserve the CW bands, and could lead to more, new prospective members of the SFM ARC.

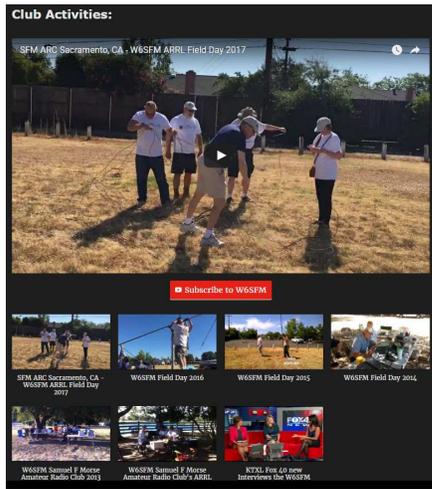
W6SFM Website Update

This month comes with some new updates to the W6SFM.COM website again. For those who have been returning to the page from time to time you may have noticed that slowly there have been many small changes and improvements. This month Mike, N6MQL has rolled out the new "Videos" page. This page is located under the "Media Clips & Pics" menu bar at the top of every page.

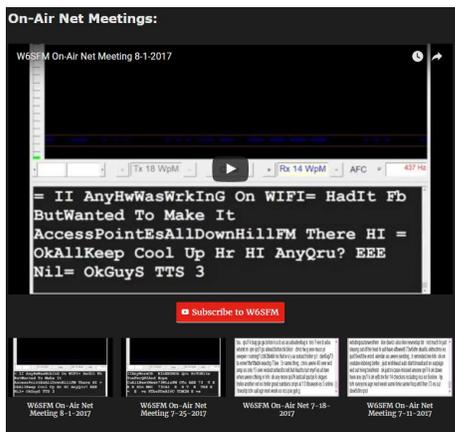
On the new Videos page, you will find 3 different category views and video libraries. The first is the "Club Activities" videos.

These are a collection of Past Field Day and other club videos. As seen on the next page.

(Website Update Cont.)



The second category is the On-Air Net Meetings library. In this section, you will find an archive of all past W6SFM Tuesday night On-Air net meetings. Each week a new video will be posted to this section after the meeting has ended.



The Third category is our "Monthly In-Person Meetings".



Each month a new club meeting video will be posted for those who were unable to attend the meeting in person, or watch it live on the first Thursday of each month at 7PM. Simply select the video you're interested to watch from one of the 3 categories to view it. The club recommends that you click the "Subscribe to the W6SFM" button so that you will be informed both when the club is broadcasting LIVE and when we post a new video to the archives. YouTube will NOT spam your email for any other reason, and accounts are FREE to login. You can even use your existing Google account to login!



W6SFM is an Affiliated club

The SFM ARC is an ARRL affiliated club. In order to continue this, we MUST have at least 51 percent of our members current with their ARRL membership. Without this W6SFM will no longer continue to receive the benefits we do from the ARRL. Benefits include the club's ARRL liability insurance policy. The club asks that you please **consider renewing, or joining the ARRL through our club.** To do

this please use the [Join/Renew ARRL link](#) on the W6SFM.COM menu to fill out your application. As a benefit, the SFM ARC receives **\$2** for each membership renewal, and **\$15** for each NEW membership we submit! ARRL membership fees are \$49 per year. You can now pay your ARRL Dues on-line with our cart system. Or, be sure to bring your check made out to "**SFMARC**" to the next club meeting. Remember, early renewals are credited with an additional 12-month period, plus your remaining balance. So, feel free to get your renewal in early to avoid having it laps and losing out on your copy of QST Magazine.

Update your Email

All members receive a W6SFM.COM email addresses. Each member has been assigned a club email address of "your call"@w6sfm.com. You do not need to sign up, or change any settings on your computer. E-mail sent to "your call"@w6sfm.com is forwarded to the address supplied to the club when you became a member. **It is very important If you plan to change your main email address PLEASE be sure to provide this new information to the club so we can update our Data Base.** Without this information, you will be unable to receive emails from the club, including this monthly newsletter.

Members Pages

A fun and useful benefit to being an SFM ARC member is your personal Members webpage. On this page, you can proudly display your bio and personal pictures to the public. We encourage our members to post news, photos and other information about themselves as well as their hobbies. Feel free to visit other member's pages found in the [members'](#) section of the W6SFM website for some examples. If you are interested in updating your own personal page, please contact admin@w6sfm.com with your pictures and bio. Or, if you feel more comfortable with QRZ.com, you may have your QRZ.com page linked to your W6SFM members' page. This means that you can do all of your own editing and maintenance of your personal W6SFM web space. Those members who do not opt to have a webpage your name and call sign will be listed in the members section without a blue link button.

Members

To visit an SFM ARC member's page, click on their Name & Call
To e-mail a member, send your mail to <member's call>@w6sfm.com

AA6DK Stan	KC6O Andrew	N6UD Wes (SK)	W6GCF Charles
AA6DT David	KE6EE Mike	N6UG Birton	
AB6JY Arnie	KE8EVR Kal	N6UOE Chuck	
A16JQ Doug	KG6FJF Angie	NA6D Ralph	
A16U Chris	K16KWX Terry	NS3J Jennifer (SK)	
AL7JK John	KJ6CA Bob	W6CCA Cap	
K5KV Benny	KJ6YCO Bill	W6UFC Tom	
K6CIM David	KJ6YCP Katy	W2RS Ray	
K6DGQ Bob	K6GCNK Josef	W6GMU Paul	
K6DQ Bob	K6G8SN Keith	W6HN Howard	
K6JJR Mark	K6G6MK Peter	W6JS Tom	
K6KSG Richard	K6G8TD Dana	W6JTA John	
K6LQ Mike	K6AMD Carol	W6RN Kevin	
K6SDW Eddy	K6GAI Kevin	W6PPP Wally	
K7NDE Gene	K26B Alan	W6FEW Tony	
K7SE Steve	N6EV Paul	W8EB Bob	
K9JPT Jon	N6JET Rick	WA6FEJ Stephen	
KA9MDP Bob	N6KIX Bob	WA6NEA Bob	

W6SFM Members Page

Club Merchandise

Club Merchandise was announced and distributed at the meeting to those who ordered within the last month. Mike N6MQL reminded the members the club still has stock on new **T-Shirts** in most all sizes. If you're interested in purchasing a new T-Shirt to replace your old, faded or stained shirt, please use the clubs NEW [Merchandise](#) order link on our website. Because T-Shirts are in-stock there is no delivery fee unless delivered to your home address. Mike also noted the club has very nice **PERSONALIZED** hats and Coffee Mugs as well! Please keep in mind that ALL members receive a **20% discount** on our Club Shirts as we ask that members wear them to Club activities and events. The 20% discount is extended to both the member and their family. **The club asks that if you plan on attending an event that is held in public that you own and adorn your W6SFM club T-Shirt at those events. It is important that we look like an organized team to the general public. Events include ARRL Field Day, Kids Day in the Park and club or organized days out in the park as an example.**



Pictured above: W6SFM Items for sale on our Merchandise web page.

August's Meeting Presentation

This month Member Carol, KP4MD presented a live demo and Power Point presentation on the use of the WSPR Net system. WSPR (pronounced "whisper") stands for "Weak Signal Propagation Reporter". It is a computer program used for weak-signal radio communication between amateur radio operators. Carol explains that the program was initially written by [Joe Taylor, K1JT](#), but is now open source and is developed by a small team. The program is designed for sending and receiving low-power transmissions to test propagation paths on the [MF](#) and [HF](#) bands. WSPR implements a protocol designed for probing potential propagation paths with low-power transmissions. Transmissions carry a station's callsign, [Maidenhead grid locator](#), and transmitter power in dBm. As Carol explained, the use of dBm levels allow for a very wide range of power transmission reporting. The program can decode signals with S/N as low as -28 dB in a 2500 Hz bandwidth. Stations with internet access can automatically upload their reception reports to a central database called WSPRnet, which includes a mapping facility.

The type of radio emission is "F1D", frequency-shift keying. The WSPR protocol compresses the information in the message into 50 binary digits. Carol also explained that the mode uses a SSB transmission as opposed to a "digital" mode. A simple rig speaker jack out to computer sound card input, and computer line out to rig Mic input (with VOX) are all that are needed to complete the set up. Carol noted that in some cases where rig manufactures don't incorporate transformers in their audio in/out (such as in the Elecraft products) it may be necessary to use a device such as a 'Rigblaster' to join radio to computer in order to keep out 60 cycle hum from ground loops.

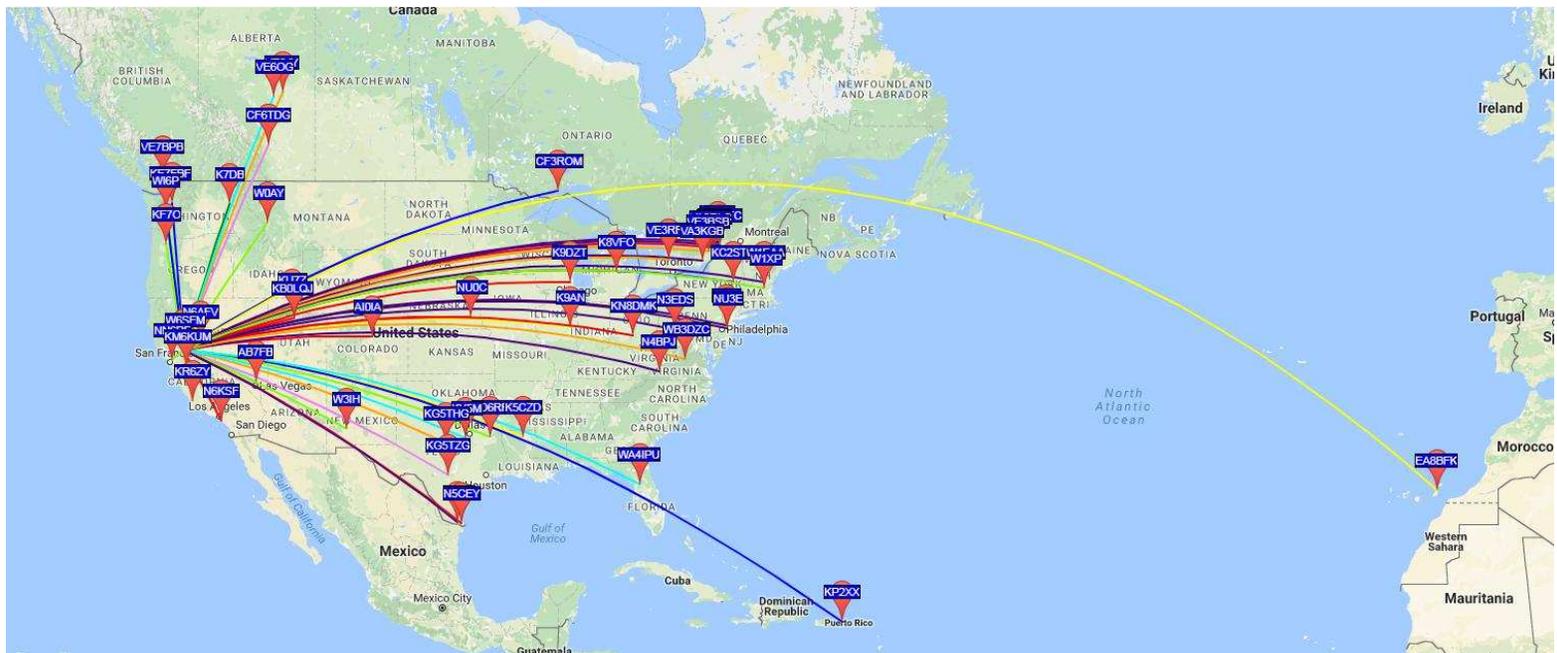
For Carol's live demonstration she used a QRP 5w Elecraft KX3 transceiver connected directly to her laptop computer. Her antenna was a simple vertical [buddistick](#) clamped to the 2nd story railing of the church balcony outside of our regular meeting room.



Example: of Carol's Balcony Mounted Buddistick used for her Demo.

Unbeknownst to the members, for the duration of her presentation, Carol left her KX3 in the "remote" transmission mode where it had an 80% duty cycle transmitting the W6SFM Call along with our meeting's grid location and the power of her station (5w). For 2 minutes, the KX3 would send our information and then listening for a period of time. Carol was using the newest experimental version WSPR-X software that also includes slow mode WSPR-15 and is 9dB more sensitive than the older WSPR-2 version. During the demonstration time, the members were unable to hear the transmission going out, or the signals being received and decoded on her laptop screen. After Carol completed her presentation she was able to project her laptop screens image of the map that was built using the WSPR Net website. on this map (seen on the next page) the lines that connect from one location to another represent those stations who either heard our low wattage transmission, or the stations that our radio received and decoded while in the listening mode.

WSPR Net Map for W6SFM Demo (8-3-2017)



As can be seen above, with only 5 watts of transmission power (40 Meters) W6SFM was able to be heard thousands of miles away within the noise floor.

The following is a list of each station that either heard W6SFM or was received by the W6SFM station during the time of Carol's presentation:

W6SFM

Hearing: AB7FB, CF6TDG, K7DB, KD6RF, N6KSF, N7UTE

Heard by: AB7FB, AI0IA, CF3ROM, CG3KI, EA8BFK, K3EA, K5CZD, K8VFO, K9AN, K9DZT, KB0LQJ, KC2STA, KD6RF, KF7FBF, KF7O, KG5THG, KG5TZG, KM6KUM, KN8DMK, KP2XX, KR6ZY, KU7Z, KY5M, N3EDS, N4BRJ, N5CEY, N6AFV, N6KSF, N7UTE, NN6RF, NU0C, NU3E, VA3KGB, VA3RLC, VE3BSB, VE3GTC, VE3LC, VE3RRD, VE6JY, VE6OG, VE7BPB, W0AY, W1EAA, W1XP, W3IH, WA4IPU, WB3DZC, WB5B, WI6P

Maps like the above are made by simply using the FREE Map Program located on the WSPRNET.ORG webpage. To make Call sign specific maps, like the above, you simply need to place the call sign of the receiving station, or the transmitting station into the filter box and click 'filter'. You will then be able to see only those spots from or to that station.

Clearly, the WSPR Net system can very easily be used for many different things. Among them are checking current or past band conditions (per band or per location), and transmission paths between stations. Carol also pointed out that because this system makes use of low (-28 dB) signals, that when comparing to a CW signal, a 1watt station that is being received at approximately -21dB would also indicate that the same station (or location) would also hear a 100-watt CW station calling.

For more information on the WSPR Net system and to use their FREE mapping and propagation system visit their homepage at <http://wspnet.org/drupal/> You can also download the FREE software to run on your computer at K1JT's page located here: <http://physics.princeton.edu/pulsar/K1JT/wspr.html>

Treasury Report

Currently our Wells Fargo account contains a total of **\$2,837.32**. The club's PayPal account is currently at **\$1,578.72** for a total of **\$4,416.04**. The Last months increase in funds are due to a generous cash donation by a member. Other income was seen from Club merchandise sold during Field Day, deposited to our accounts after our July meeting and before our August meeting.

Next Month's Meeting

Our next SFM ARC in-person meeting will be held at its normal time and location **Sep. 7th** (followed by our **Oct 5th** meeting). The SFM ARC in-person meeting will be held in the Howard Crowley room upstairs at the Carmichael Presbyterian Church. Directions, including a Google Map is available at the bottom of the W6SFM.com homepage. At our **September** meeting, we will be discussing ARRL news and events. We will also have a presentation on the use and understanding of the Solar Indices report. As always, we will have our Tech (show and tell) portion. Members and visitors are asked to share their Ham Radio related items they find of interest. Attend our In-Person meetings with items that you've purchased or were given to you that you would like to share with others in the group. Visitors

are always welcome to join us at our meetings.

On-Air Net Meeting

Each Tuesday of the week 8:00 PM on 3.545 MHz the SFM ARC enjoys getting on the air with CW for our weekly Nets. You do NOT need to be a member of the SFM ARC to check into our nets and we encourage you to invite a friend to join us as well. Although our nets usually run around 13 wpm code, we are all happy to accommodate those that are slower and need us to oblige. If you are unable to copy Morse Code or need some code practice, please feel free to visit our on-line LIVE streaming broadcast of both the Audio and a CW to Text decoding of the meeting. The "**LIVE FEED**" link can be found on our home page of our website. With our new YouTube Live streaming system, you can now watch the Live Feed on your Apple IOS or Android devices. You do not need to have a YouTube account to access the feed. However, you will to subscribe to our channel. Those visiting the feed can chat with others watching on-line as well. This of course is not mandatory, but rather just a way of making everyone feel more involved in our on-air nets. If you like, you can "check-in" using the chat window and you will be included with our On-Air Net log.

Simply announce your call letters in the chat window.

Tell A Friend

Do you know someone in need of a Ham Club to call home? Perhaps someone that wants to learn Morse Code, are interested in CW or already knows and uses it? The SFM ARC would love to be their new Club home. Our in-person meetings are held each **1st Thursday of the month at 7PM**. Please use the rear parking lot and entry for best access to the meeting. A map and directions can also be found on our website. We hope to see you at our next meeting!

Thank You

If you enjoy this newsletter and would like to contribute to it, we ask that ALL members please send in interesting information, or stories they would like to share with the other members. If you would like to write a monthly (or periodic) news article we would welcome that as well. Please be sure to contact admin@w6sfm.com with your ideas! Until our next newsletter, I thank you all very much for being a member of the SFM ARC, without you this club could not exist.

