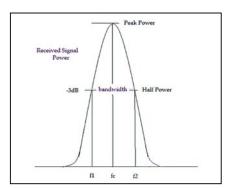
The KeyNote



Newsletter of the Americas Chapter, FISTS CW Club—The International Morse Preservation Society Issue #4, 2015

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INFORMATION PAGE

When you have a question about FISTS, go to the source for the correct answer. Posting a question on a chat room or e-mail reflector may yield the answer, but your best bet is to ask a FISTS volunteer or look in the reference issue. Several volunteer contacts and/or e-mail addresses have changed from the last reference issue of *The KeyNote*. Please make note of the following listings.

When e-mailing a volunteer please put the word FISTS in the title of your e-mail. This will help the volunteer recognize that your e-mail is important and not spam.

Awards and Certificates

Dennis Franklin, K6DF, <u>awards@fistsna.org</u> 4658 Capitan Dr., Fremont, CA 94536-5448

OSL Bureau

Stan Reas, K4UK, <u>k4uk@fistsna.org</u> 1020 Long Island Dr., Moneta, VA 24121-1952

Club Call, KNOWCW

Cody Codianni, KC2LSD, <u>kc2lsd@fistsna.org</u> 413 Martin Court, Leonardo, NJ 07737-1317

Membership Questions; Renewals; Call Changes; Name, Mailing, and E-mail Address Changes

Dennis Franklin, K6DF, <u>membership@fistsna.org</u> 4658 Capitan Dr., Fremont, CA 94536-5448

Membership Application or Sample KeyNotes for Friends

Jim Ranieri, AA9LS, <u>aa9ls@turbotoads.com</u> 33778 Rebecca Rd., Kingston, IL 60145

Website Changes (including getting your personal or club web page linked)

Dennis Franklin, K6DF, <u>webmaster@fistsna.org</u> 4658 Capitan Dr., Fremont, CA 94536-5448

Club Presentation Packets

Joe Spencer, KK5NA, <u>kk5na@kk5na.com</u> 3618 Montridge Ct., Arlington, TX 76016-4821

Code Buddy Volunteers and Buddies

http://www.fistsna.org/codebuddy.html

FISTS Sprints

Ed Wlodarski, N2ED, <u>n2ed@fistsna.org</u> 3 Shore Rd., Andover, NJ 07821-2240

Get Your Feet Wet Activity Day/G3ZQS Memorial Straight Key Contest

Karl Zuk, N2KZ, <u>feetwetlogs@fistsna.org</u>, <u>g3zqslogs@fistsna.org</u>
15 Flintlock Ridge Rd., Katonah, NY 10536-2510

The KeyNote Newsletter

keynote@fistsna.org



The KeyNote

The Newsletter of the Americas Chapter of FISTS Issue #4, 2015

Send articles to:

keynote@fistsna.org



Design: Mary Cronin

www.marycronindesign.com

Americas Chapter Message

By Dennis, K6DF #3076

By the time you receive this newsletter we should be well into, if not near the end of, the holiday season and I hope you and your families had a Happy Holiday Season. Hopefully more of us will be on the bands making CW QSOs with cooler days and nights prodding us to enjoy indoor activities. It only takes one motorcycle ride in the snow or rain to make one think it is better to sit in a warm shack pounding the brass than out in the cold WX . . . hi hi

Once again I extend a warm welcome to all of our new members and a thank you to all the renewing members who continue their support of the Americas Chapter FISTS CW Club. A list of new members are shown on page 7. New members are also listed on the main website page.

If you are unsure of your dues expiration date, you can look it up on the following web page: http://www.fistsna.org/expdate.php.

Chapter Updates

The total number of new members in 2014 was 484 and so far this year we have 517 new members. It looks like we will finish 2015 with a record number of new members. On September 24, 2015 the regular membership dues were changed to a flat \$10 per year. This includes a mailed and/or on-line newsletter. This change was made to simplify the dues structure and make the membership more affordable. Free membership for family members of a current FISTS member

(living in the same household) will continue to be available, although they will not receive *The Keynote* newsletter. Only one *Keynote* newsletter will be mailed to a household. We still offer free membership for those under age 18 and over age 80. We encourage members to elect to receive their newsletters On-Line ONLY to help reduce printing and mailing costs.

On-Line newsletters are now available to anyone with the exception of the last four issues. The last four issues of *The Keynote* newsletter will be made available to dues paying members via a web server issued User Name and Password. A User Name and Password will be sent to you via the current e-mail address we have on file. If you are having trouble getting or changing your password, it is probably because your e-mail address has changed from the one that we currently have on file. To get this corrected, just send an e-mail to me at membership@fistsna.org.

I would like to give a special thanks to Graham, G3ZOD, for all his time, effort, and programming skills in setting up the newsletter download pages and the server routines that will allow members to automatically request and receive new passwords as well as change their password if needed. A job well done sir!

As you may or may not know, there are NO paid employees to take care of and manage operating activities, website, chapter administration, store, newsletters, membership, QSL bureau, and finances. Volunteer members manage and run

(continued on page 4)

Americas Chapter Message (continued)

these activities. Occasionally we need additional help with some things as volunteers resign or retire from their positions. Currently we have a few positions that still need filling by qualified volunteers and the Chapter Directors are asking for the membership's help. Positions that are currently open are: Store Manager, Newsletter Editor, and Manager of the Dayton Hamvention booth. The Dayton Booth Manager is of the utmost importance as planning for this May 2016 event will be in full swing very soon. If you feel you can help with one of these positions, please send an e-mail to Dennis, K6DF, at webmaster@fistsna.org.

We hope to increase activity in the 2016 Sprints by offering some award incentives, so be sure and check for an announcement elsewhere in this newsletter as well as on the chapter website. Speaking of operating activities, I would like to invite any of our members to contact Cody, KC2LSD, to set some dates for your use of the KN0WCW club call. Maybe some of our newer members might like to get their feet wet with the club by operating KN0WCW for a weekend. Cody's e-mail and mailing addresses are listed on the Information Page of this newsletter.

I look forward to working many of you on the air in 2016. Best wishes to you and yours for a Happy and Healthy New Year.



Director Reports

Director, Operating Activities—Ed, N2ED

The Sprints are seeing a gradual increase in participation but still not where it should be given the number of Fists Members.

I have noticed that there are quite a number of participants that do not submit a log for the Sprints.

I encourage all to submit a log even if you only make one Sprint QSO!

Starting with the 2016 Winter Sprints, we are going to offer prizes for the first, second and third place finishers in each category.

First place in each Sprint will receive a FISTS T-shirt and coffee mug. Second place will be a FISTS T-shirt and Third place will be a FISTS coffee mug.

One caveat however, we need to have a minimum of five logs submitted in the category and a minimum of ten QSOs will be required to have been made by a participant to be eligible.

Happy Holidays to all and hope to hear .058 alive with CW!

73, Ed Wlodarski N2ED

Director, QSL Bureau—Stan, K4UK

We have received 310 QSL cards here at the Bureau for this year.

Of these 281 cards were for members in the U.S.

There were 9 cards for members in Canada and 3 cards for DX members in North America or South America. There were 17 cards for members in Europe.

We have received ZERO QSL cards during the last three months.

We have made mailings to those members for whom we had three or more cards on hand.

(continued on page 5)

Director Reports (continued)

We now have a total of 270 cards on hand for members. We have a total of 10,997 SASEs on hand for members. We will mail out all QSL cards we have on hand to the membership at the end of November, regardless if you have an SASE on file or not.

The Bureau has five FISTS members who do the work: Riley-K4ORD, Dick-K1HEL, Frank-K4HOA, Buddy-W4YE and Stan-K4UK.

73, Stan K4UK

Director, Finance—Joe N8TI

As the Director in charge of financial matters, I keep the checkbook for the Chapter and will, after the end of the year, file the tax return and any other reports required by the federal and state governments.

The Chapter's major expense is the publication of *The Keynote*. None of the Directors is paid for his service. In fact, except for the costs of publishing and printing *The Keynote*, FISTS runs on all volunteer labor.

The rule is that no member is paid for services or for the use of their home or utilities. No Director gets even a cup of coffee for free. There is reimbursement for direct out of pocket costs, such as postage and there is no money spent on travel or meetings except for traveling to Dayton to man the FISTS booth. FISTS does not have any assets, such as computers or radios. The Directors use all their own equipment for FISTS activities. They meet via e-mail. The Chapter is in good financial shape and should break even each year financially.

73, Joe N8TI

Director, Club Call KNOWCW—Cody, KC2LSD

I am writing to you my fellow FISTS members in an effort to get our club call on the air more frequently. This calendar year I personally made nearly 200 contacts running KN0WCW, this includes a few of our Sprints. I can't tell you how much fun I had contacting my fellow members, and non-members. I'm asking all of you to think about giving it a try. Think of it as a way of giving back to FISTS.

If there is an increase in the club call activation, I plan on registering KN0WCW for LOTW. That would include all call areas. It's a bit of work, but if participation increases, I'll make it happen. People will want to make a contact with KN0WCW if for no other reason than it's a quite a unique call sign. Help us get the word out about FISTS, take the club call for a ride, you just may like it. If you have any question feel free to drop me an e-mail.

73, Cody KC2LSD #11793

Director, Website, Membership—Interim President Dennis, K6DF

The Americas web site is constantly changing as I try to keep up with current club events, new members, and general information to keep the membership informed. Some of the changes we have made throughout this year are: Dues Expiration Look-Up, On-Line *Keynotes*, and the ability to request a password or change your password for *Keynote* downloads. The current *Keynote* download page and automatic password generation was made possible by the programming skills of Graham, G3ZOD. On behalf of our membership, I thank you sir for your time and efforts, it is most appreciated.

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Director Reports (continued)

Our chapter membership is constantly expanding. This year alone we will surpass last year in new members as well as renewals. The membership dues were lowered to \$10 starting Sept 24, 2015 by discussion and vote of the Board of Directors. This may be the reason for the sudden upturn in new members and renewals since that date.

Our chapter is in very good shape and I feel we are ready to move into 2016, which will be a year to make plans for the upcoming 30th anniversary of our FISTS CW Club in 2017. Wow... 30 years, where did the time go? If you have any suggestions or ideas for the celebration of our 30th year please send them along for consideration. All four of the FISTS chapters, around the world, will coordinate a unified celebration in 2017. So please look for some fun things ahead.

73, Dennis K6DF

Director, Social Media—Tim AC5SH

From the world of social media, reflectors etc. All is well here with about 300 Twitter followers @FistsnaCWclub, more than 2,000 subscribers at the Mailman Updates mass e-mailer run by myself and quite a few at the open reflector run by Graham, G3ZOD. Additionally, we have some activity at our LinkedIn group started by Tomas, NW7US for us. Our primary social media presence is on Facebook at https://www.facebook.com/pages/FISTS-CW-Club-The-International-Morse-Preservation-Society/343464550378?fref=ts and doing very well with over twelve hundred likes now.

There is much more to tell but with limited space, I must refrain. Please e-mail me for more info at <u>AC5SH@aol.com</u> and consider joining our Facebook group linked here: https://www.facebook.com/groups/FistsNA/

where one can get quick answers to questions, air his or her opinions etc., and where QRV reports (with frequency, QTH, etc.) are welcome and will help to stir FISTS on the air activity.

Hope to C U there and on the air, 73, Tim, AC5SH/FISTS 5654

FISTS AWARDS

By Dennis K6DF

This time we have a pretty good list of award recipients since the last newsletter. It looks like the members in the European Chapter have been spending some time on the bands and making lots of FISTS QSOs. A tip-of-the-hat and congratulations to all the operators listed at the end of this column.

With winter months approaching, I believe we will see more awards listed in the next newsletter. Usually when the weather turns cold with snow and rain we tend to stay indoors more and get on the bands. (That is true if one does not live in California, as we do not get much snow and very little rain.) I invite all of our new members to get on the air and have some fun with CW as well as earn some of the available operating awards. Remember, all FISTS awards are sent free to current dues paying members. If you are rather new to operating CW and need a little help to get started, I would suggest you look at the FISTS Code Buddy web page at http://www.fistsna.org/codebuddy.html. If you are an experienced CW op, why not volunteer to become a Code Buddy on that very same web page?

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WELCOME NEW FISTS AMERICAS CHAPTER MEMBERS

Call	FISTS#	First Name	S/P/C	Call	FISTS#	First Name	S/P/C
AE4QQ	17368	David	GA	KT5H	17507	Steve	AR
NS0O	17369	Chester	AZ	K0JV	17508	Jerry	SD
KI6TYH	17370	Harold	CA	WA1TCC	17509	Robert	FL
KM4GRG	17371	Chris	GA	K0GUN	17510	Gordon	MO
KJ4OYM	17372	Stephen	TN	KT9V	17511	Terry	IN
K7EY	17373	Bruce	UT	W3LB	17512	Brian	PA
KD9BVO	17374	Kit	IL	K3JZD	17512	Jody	PA
AJ4ON	17375	Bob	TN	AC0NF	17514	Helen	MO
KE5RMZ	17376	Paul	TX				
KK6SMF	17377	Ray	CA	KB1HHP	17515	Sharon	CT
KE7WNB	17378	John	OR	N6PEQ	17516	Dan	CA
K6RWM	17379	Robert	CA	AD5YR	17517	Allen	TX
N8KQ	17380	Randy	ОН	KD9EHB	17518	Gregory	WI
KJ4DHI	17381	Pat	GA	K4MLD	17519	Cliff	VA
K7QXY	17382	Bob	OR	KD2EPQ	17520	J C Pierre	NY
N8YP	17383	Jeremy	MI	KA5T	17521	Larry	TX
KI4EZL	17384	Steven	NC	K4ULP	17522	Lanny	SC
K2MAX	17385	Max	CA	W5HKE	17523	Glen	TX
K4OH	17386	John	KY	K1DJ	17524	Richard	MA
KG7UWM	17387	Steve	UT	K1SLT	17525	Michael	NH
KW4MG	17388	Gary	FL	N7TGC	17526	Tommy	FL
K4EEG	17389	Roy	AL	KB8LVC	17527	Robert	MI
W1FOX	17390	Brian	FL	AA7XP	17528	Herbert	OR
W7WXX	17391	Michael	AZ	KOJRS	17529	David	PA
VE3DZP	17392	Gary	ON	•	17530	David	TX
N0JIT K3ISI	17393	John	MO WA	KG5JBA			
W6ZRT	17394 17395	Amy Stephen	CA	W6GYC	17531	Michael	CA
K4MLP	17393	Malcolm	AL	WA4QWN	17532	Mac	VA
W1CMC	17390	Charles	MA	W2NRA	17533	Art	NY
AD0HQ	17397	Paul	MN	WD5IDB	17534	Howard	OK
WA5TED	17398	Gary	TX	K4TS	17535	Club Station	
VE3IC	17500	Club Station	ON	K4GVA	17536	Club Station	VA
KI4EZK	17501	Charlotte	NC	W4NYM	17537	James	GA
N2HTT	17502	Michael	NY				
KG5DVY	17503	Sid	OK				
KC1BUO	17504	Timothy	MA				
N4TMM	17505	James	GA				
AE4PB	17506	Jerry	SC				
AL41D	1/300	Jell A	30				

FISTS Awards (continued)

In addition to the many FISTS CW Club operating awards, you may also find additional awards available through some of the other FISTS Chapters. Links to other FISTS Chapter websites are available on the following web site:

http://fists.org/

You may use the following e-mail address, (awards@fistsna.org) for sending in your award logs. Excel, Word, Open Office, and Text files are the only file types accepted. Please read the e-mail log rules on the FISTS web site (shown below) for details.

You may also use the "FISTS Log Converter", written by Graham, G3ZOD, to automatically send in your award logs. Please check out and download this FREE software on the following web page: http://www.fistsna.org/logconverter.html.

Send in complete logs for awards. That means all of the following information: Call, Date of QSO, Band, FISTS Nr., Point(s) claimed for each QSO. Incomplete logs will cause a delay in processing your award.

Check the FISTS Web Page for additional information regarding current FISTS awards and how to apply for them:

http://www.fistsna.org/awards.html

If you have any questions about the awards that are not answered on the FISTS awards web page, feel free to e-mail your questions to me at: awards@fistsna.org.

I look forward to a QSO with our newer members as well as many of our current and renewing members throughout the year in 2016. I wish you a Happy New Year, good health and good DX.

73, Dennis K6DF

FISTS AWARDS ISSUED: Jul 31, 2015 – Nov 6, 2015

Century Award

G0POT, M0GGK, K5DNA

Silver Award

PA3GBK

Gold Award

G0ILN, I5ECW

Diamond Award

G4MLW

1 X QRP Award

G0POT

Millionaire Award

G4RHR, PA3GBK

Rag Chewers' Club Award

ZL2AIM, ZL1CV, G4MLW

2 Million Award

ZL2AIM, F6HKA

3 Million Award

G3ZOD, F6HKA

4 Million Award

F6HKA

5 Million Award

PA7RA, F6HKA

6 Million Award

F6HKA

7 Million Award

G4MLW, F6HKA

8, 9 and 10 Million Award

F6HKA

11, 12, and 13 Million Award

OK1KW, F6HKA

14, 15, 16, 17, 18, and 19 Million Award

F6HKA

Three Secrets of CW QRP

By Randall Noon, KCOCCR

Many CW or Morse Code operators are also QRP or low-power aficionados. This is because CW lends itself well to low-power operations. A person operating with CW using just a simple wire antenna and a typical low-power transceiver can often work the world with just 5 watts. To accomplish the same communication feat under identical conditions using voice mode usually requires either an antenna with significantly more gain, or a transmitter with more output power.

An additional benefit of combining CW and QRP operation is that the equipment is often cheaper, smaller, and lighter. A serviceable QRP rig causes less pain to your wallet, causes less pain to your back, requires less ancillary support equipment, and all of it can operate with easy-to-carry batteries. (Have you ever lugged a battery capable of providing 20 to 25 amperes in a backpack?)

All these reasons combine to make CW a favorite operating mode of members of HFPack, Bicycle Mobile Hams of America, Summits-On-The-Air, NAQCC, and all kinds of portable ham radio enthusiasts. And of course, I don't want to ignore the stay-at-home in a comfortable chair with an appropriate cold or hot drink QRP-ers.

So what is the secret of operating successful CW QRP? While I may have to go undercover for revealing them (this is sort of like a magician revealing how magic tricks are done), here are the three primary secrets of operating CW QRP that, once revealed, may change the ham world as we know it.

QRP Secret #1: QRP Doesn't Really Sacrifice Much

Consider the following—Let's say you first make a contact using 100 watts and the fellow at the other end gives you an honest report of 599. (Really, an honest RST report could happen.) What happens if you then switch to 5 watts?

Recall that the definition of a decibel, when one level of power is compared to another, is as follows:

$$x (in db's) = 10(log P1/P2)$$

In this case, P1 is equal to 100 watts and P2 is equal to 5 watts. The difference between a power output of 100 watts and 5 watts is -13.01 decibels. If the operator who reported the RST of 599 used his S-meter to provide that information, and his S-meter is somewhat close to the IARU Region 1 Recommendation R.1 for HF signals, then the first "9" in the RST report would perhaps correspond to a "9" on his "S" meter and indicates a signal strength of 50.2 microvolts at the receiver's 50 ohm antenna input, or -73 dbm. (The "m" in dbm indicates that P1 is referenced against 1 milliwatt, that is, P2 in the above equation is equal to one milliwatt.)

Now, it has become the practice of many, if not most, operators to correlate the indicated "S" meter number to the Signal Strength number in providing RST system reports. Thus, a signal strength indicated on an "S" meter of "9" is reported as the first "9" in 599. In the original RST system, however, a signal meter swing of about 75% towards the high end might be considered a "9" in a 599 report. The original RST system depended more on the receiver's audible perception of the signal than the "S" meter indication because S-meters in receivers in the not-so-distant past were often inaccurate.

While correlating S units to signal strength in the RST system may not be exactly "according to Hoyle," I am using the present practice of using indicated S-meter units for signal strength. With respect to the points being made in the following paragraphs, it makes no difference anyway. So,

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Three Secrets...(continued)

purists...take a deep breath and relax a little. It won't hurt.

Bear in mind that the signal attenuation that occurs in the pathway between the transmitter and the receiver generally reduces HF signals proportionally. Thus, if instead of an output power of 100 watts, the transmitter is switched to 5 watts of output, a proportional decrease in power of -13.01 decibels occurs at the receiving end. The person who reports a signal strength of "9" or -73 dbm when the transmitter's output power is 100 watts, should then expect a drop in signal strength to -86 dbm when the transmitter's output power is reduced to 5 watts. (Add the -13.01 dbm to the -73 dbm to get -86.01 dbm.) Theoretically, since each "S" meter unit is supposed to be equal to 6 decibels, the resulting new RST for 5 watts instead of 100 watts would then be 579 instead of 599.

So, using QRP level power does not cause a person's signal to fall into an eternal abyss of lost signals. As compared to 100 watts, which is the standard "barefoot" power output of most off-the-shelf transceivers, a QRP output power of 5 watts only causes a drop of two "S" units at the receiving end. Unless band noise levels are high due to coronal mass ejections, the ionosphere in the middle latitudes is acting snarky again, or perhaps QRM splatter from a nearby QSO is a kick in the head, most transceivers will comfortably receive a 339 or 439 CW signal. Consequently, if the receiving end can hear you at 100 watts with an RST from 449 to 599, he or she generally can also hear you well enough at 5 watts.

QRP Secret #2: Zero Beat Your Target

One of the advantages of CW is that it has a narrow bandwidth. One of the disadvantages of CW is that it has a narrow bandwidth. As an

approximation, the bandwidth of a CW signal is a function of sending speed, that is, words per minute. Roughly speaking and ignoring ad nauseam arguments of hard keying versus soft keying, the bandwidth occupied by a CW signal is about 4 times the sending speed in words per minute. Thus, sending at 25 wpm requires a bandwidth of about 100 Hertz. Sending at 15 wpm requires a bandwidth of about 60 Hertz, and so on.

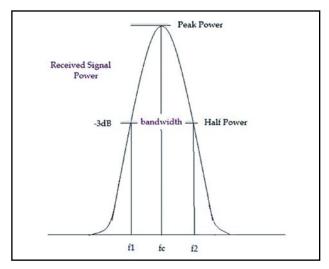


Figure 1. Bandwidth vs. Signal Strength

If the center peak of your QRP signal exactly matches the center of the receiving bandwidth, you maximize your ability to be heard at the receiving end. If the center of your signal is misaligned with the center of the receiver's bandwidth, however, your apparent signal strength is diminished at the receiving end. If there is too much misalignment, he won't even know you are there.

Consider the information depicted in Figure 1. Bandwidth is normally considered to be the frequency spread in which signal strength is at least half of the peak value. That is, the drop in

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Three Secrets... (continued)

decibels at the edges of the bandwidth, at points f1 and f2, is -3 dbm. If you send CW at 20 wpm and your bandwidth is 80 Hz, then f1 in Figure 1 is 40 Hz less than the peak at fc, and f2 is 40 Hz higher than the peak.

Let's say that the receiver is filtered for a centered receiving frequency of 14.058 MHz, or 14,058,000 Hz, with a filter CW width of 50 Hertz. That is 25 Hz on either side of the center frequency. What happens if you slightly misalign your sending frequency with the center receiving frequency? At a sending frequency of 14.580080 MHz, your signal is 80 Hertz higher than his or her center frequency, and is well higher than the +25 Hertz that is allowed by the receiver's filter. You will lose well more than half of your signal strength due to this misalignment. You may not even be heard.

What if his filter is a little wider at 100 Hertz? That is still not enough. A 100-Hertz filter will hear up to 14.058050 on the high side of the peak without too much signal strength loss. However, at 80 Hertz higher, you will have a diminished apparent signal strength and still may not be heard.

In order to be heard at +80 Hertz above the center frequency of the receiver, the filter in this example has to have a width of about 250 Hertz so that your +80 Hertz signal fits well within the receiver's +125 Hertz upper half. Now, you might be heard. In general, if you are working a pileup or a contest, the receiver is likely using a filter to shut out some of the nearby QRM. You don't want to be filtered out if you want the contact.

Do the other guys operating at 100 watts have the same problem? Yes they do, but they have more margin for error than you. If an operator, for example, sending at 100 watts has his signal strength cut in half by being off-center at the -3 dbm point, he still has the signal strength equivalent of a 50-watt signal. Further, the received signal of the 100 watt operator can be misaligned such that the signal strength is reduced by -13.01 dbm and his signal will still be at least equal in strength to a 5 watt signal that is well aligned to the receiver's center frequency.

Fortunately for QRP operators, many operators using 100 watts of output are often sloppy in this regard. They often rely on the indicated frequency of a digital indicator, an LED light that indicates "on frequency," or perhaps illuminated bars where the frequency being received is centered as a mark between the two bars. In any case, because these operators have more margin than you, they often don't carefully zero-beat the other signal because they don't need to. It's a bit like playing grenades: close is good enough for them.

You may have already noticed this if you have zero-beat the frequencies of two operators both using 100 watts of power. Operator A may be sending at, for example, 14.058095 MHz, and Operator B, may be replying at 14.05785 MHz. While the difference in sending and receiving frequencies of 245 Hertz may not prevent them from hearing each other at a reasonable signal level, that difference can be your advantage. If you wish to QSO with one of them and carefully zero-beat your signal, you could have a stronger signal than the other operator who is misaligned 245 Hertz from the center frequency.

The tendency of some operators to rely upon frequency matching features instead of audibly zero-beating to match frequencies can let a QRP operator sometimes "steal" a pileup from the typical operator swarm. Zero-beating the target frequency by ear and being exactly on frequency center will often allow a QRP CW operator to make a fine DX contact in a pileup while other,

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Three Secrets (continued)

more powerful stations, hover covetously about the center frequency but don't exactly match it.

Using the same secret, when operating split and the target says to go UP 1, don't just click the dial to the next higher kilohertz. You may still be off-center because the frequency indicator on your transceiver may not exactly match the target's transceiver. What may casually look like a frequency of 28.058 MHz to three or four decimal places, may actually be 28.058092 MHz. Carefully zero-beat the sending frequency, note the frequency, add 1000 Hz for the UP 1 frequency and then set your split accordingly. (Remember those RIT and XIT buttons?) You may find that by taking care of the small discrepancy between transceiver frequencies, you are now matching the target operator's UP 1, while most of the pileup is undershooting by using an UP 1 actually equal to 908 Hz instead of 1000 Hz.

I have a QRP rig that does not have a side tone for zero-beating. To overcome that, I use a practice straight key, an MFJ-557, and set the tone on the practice key to match the CW sending tone in the rig. The MFJ-557 has an earplug jack outlet. I can match tones, and turn the volume of the MFJ-557 down so that I can hear the tone being received at the same time that I hear the tone from the practice key. It works very well.

QRP Secret #3: Sometimes Slowing Down Helps

One of the reasons why CW outperforms voice is its signal "brightness," which is an approximate but easy to figure measure of its signal-to-noise ratio. If you send a voice signal that occupies a bandwidth of 2400 Hz at 100 watts, you have a "brightness" of 100 w/2400 Hz = 0.0417 watts/Hz. If you send a CW signal at 20 wpm, it will occupy a bandwidth of about 80 Hz. If you use 100 watts to do this, the corresponding brightness will be

100 w/80 Hz = 1.25 w/Hz. Note that the CW signal is 30 times brighter than the voice signal at the same power level. To match the brightness of a 100 w voice signal at a CW sending speed of 20 wpm, you need to reduce the CW power to 3.33 watts. (Another reason why a person can work the world using CW and 5 watts.)

Consequently, if you are right on the frequency and don't think your signal is being heard, you can enhance your signal brightness by simply slowing down your CW sending speed. At 5 watts and 25 wpm, the signal brightness is 0.050 w/Hz. If you slow down to 13 wpm from 25 wpm and stay at the same power level, 5 watts, your brightness increases to 0.096 w/Hz, a brightness increase of almost double. This might be just enough of a brightness increase to snag that highly desirous DX QSO.

In short, sending a bit slower can improve your apparent signal strength at the receiving end. However, please note that as you increase the signal's brightness with respect to the other signals, you also lessen its bandwidth. Thus, this secret works IF you are right on the frequency. If you are misaligned from the center frequency of the receiver and the receiver is picking up a "side skirt" of your signal, then by reducing bandwidth, your reduced side skirt may no longer be within the receiver's center frequency zone. But then again, you didn't do a good zero-beat in the first place.

Now you know the three CW QSO secrets. Please use them for good.

Life's a Beach—QRP Operations from the Beach

By Will Ravenel, AI4VE

I like working QRP from the field. That usually means CW since low-power communication is more effective with narrow bandwidth signals and digital modes require lugging extra computing hardware and batteries (usually—see below). I live on the coast in beautiful Charleston, SC, and we have three local beaches to choose from. My wife loves the beach and this gives me a chance to spend time with her. We sit sideby-side, while she reads and I copy CW. The beach is a great place for QRP DX; the Atlantic Ocean provides a pretty good ground. This summer has not offered many chances to do this due to bad weather and family obligations. Between the heat, summer thunderstorms, and general rainy conditions this year, I was not able to head to the beach for some operating until things had finally cooled down last Sunday, September 13th.

Some considerations and tips for operating on the beach:

- Sun Protection—There's not much shade out there. Use sunscreen, dress appropriately, and wear a hat.
- 2. There are no trees or other natural antenna supports so bring your own.
- 3. On windy days salt spray and blowing sand can take a toll on sensitive electronic equipment. I take my least expensive rig on those days. Ziplock bags, cases, and other protection for gear are important.
- 4. Between the waves, seagulls, and people, the background noise is high. A good set of headphones or ear plug phones are helpful.
- 5. You will attract attention. This is not a good environment for serious contesting. You'll be interrupted with questions about what you're



Figure 1. Al4VE enjoying a perfect day at the beach. Note the swing-up shelf on the right side of the chair and the storage pockets on the left side of the chair.

doing. Today I was asked, "Is that some kind of fishing pole?" "What are you doing, CB Radio?" "Are you in the Secret Service?" (No kidding.) And one ex-Airforce Pilot who actually knew about Ham Radio asked, "Is that an HF antenna?" He had taken advantage of the Ham Radio phone patches that were commonly used for calls home during his service. He actually thanked me for being part of the hobby that provided this service. It's rewarding to me to provide a little education about Ham Radio to the public.

6. My normal beach rig is a four-band K1 and 7 amphour external gel cell battery. On days when the wind is not strong enough to blow sand and salt into everything I'll take my KX3. Today was such a day—beautiful, partly cloudy, high temperature of 83 degrees, and a 10 mph breeze off the shore that kept the waves small and the ocean flat.

My normal antenna is some form of end-fed wire suspended from a 31 foot Jackite pole (Figure 2). I've tried various forms of Half Wave End Fed (HWEF) antennas with L/C match boxes, random length wires (continued, page 14)

Life's A Beach...(continued)

with 9:1 Baluns and counterpoises, or Antenna Tuning Units (ATUs). Lately, I've had good luck with a LNR 10/20/40m HWEF in a sloper configuration (see Fig. 2) and that is what was used on today's outing. This antenna provides three bands of operation without the need for an ATU. By choosing the direction of slope, additional gain can be achieved on your preferred bearing. When the wind is not too strong I attach the base of the pole with a few bungee cords to a four-foot length of rebar driven about two feet into the hard sand. Stronger breezes require guying.



Figure 2. Jackite pole (31 ft.) strapped to 4 ft rebar rod driven 2 ft into the hard sand.

One accessory that has proven indispensable is a folding beach chair with a folding shelf on the right side and convenient storage pockets on the left. The rig and external battery can be set on the shelf within easy operating reach but well above the sand (Figure 3). The only way this chair could be more perfect is if the shelf was on the left (I'm right-handed but key with my left)

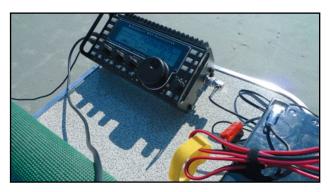


Figure 3. KX3 and external battery placed on the convenient fold-up shelf of the beach chair

allowing the use of a paddle on the shelf as well. Alas, I've not found a left-handed version of the chair or a version with a shelf on each side. To overcome this shortcoming I use a plastic clipboard on which I've mounted a Palm Paddle with heavy Velcro (Figure 4). Careful placement of the paddle leaves room for a steno pad to be clipped



Figure 4. Clipboard and Palm Paddle work surface.

to the board for logging. The clip has the added benefit of keeping the pages from flipping in the breeze. Note the paddle on the left and the pad

(continued, page 15)

Life's A Beach...(continued)

on the right to accommodate my chosen mode of operating. The clipboard sits in my lap, providing a firm surface for me to key with my left hand and log with my right.

So how did I do on this near-perfect day? Not too bad. In the 70 minutes of operating (including breaks to answer questions) I managed to work stations in Canada, Belgium, Oklahoma, Arizona, Florida, Italy, and France. The propagation was not particularly good today, but with five watts, CW, and the magic of salt water, there was fun to be had.

I encourage you to give beach CW a try if you are lucky enough to live near the ocean or on your next vacation to the shore. Besides the fun of QRP contacts, it's another great way to educate folks about Ham Radio. When I explain what I'm doing to the curious, the most common response I get is, "I didn't know people still did Ham Radio." I hate hearing that and enjoy correcting this all-to-common misconception.

By the way, when I said earlier that "digital modes require lugging extra computing hardware and batteries (usually)" I was referring to the ability of the Elecraft K3 and KX3 to work RTTY and PSK31 directly using paddles and CW. No external computer and extra battery needed! It requires using the rig's internal keyer in these radios but it is a real blast to send Morse Code and hear the familiar digital mode warbles come out of the radio. You can read the replies as they scroll across the screen where the VFO B frequency is usually displayed.

Ragchewing with FISTS

By ZL2AIM Fists #9683

Whilst the DX bands have not been that kosher this past month due to the lower Solar Flux Index, I have been able to have some good ragchews with fellow FISTS members. 40 meters during the day was fair and 80 meters has been exceptional and QRP worked well. My OHR100 has been earning it's keep.

I have mentioned before that it is worthwhile to have a look around the FISTS websites. I have also mentioned previously that you might find that you already qualify for some of the awards. I was looking at the Rag Chewers' Award requirements and thought that I might qualify for that. You need to have 100 QSOs of 30 minutes or longer with other FISTS members. So, I opened up my electronic log book (HRD Log) and put in a filter for FISTS members. I am in the habit of writing down the FISTS membership number in the comments part of the log during the QSO. Don't forget it is so easy during a conversation to send "Fists?" I have also kept a log of the length of the QSO, so it was easy to find those that were 30 mins or longer.

I soon discovered that I have been ragchewing with Rob ZL1CV since October last year and with his call sign alone I had attained the requirements of the award. Yes, we had had more than 100 QSOs of 30 mins or more over the last 10 months. I sent in my request to Dennis K6DF and within a few hours he had checked the log and found that both Rob and I would qualify for the award. He told me that this was the first time that he would be awarding the certificate when all the logs were with the one station. He asked me if I was prepared to share the award with Rob. Of course! So now Rob and I have certificates number 96B and 96A. I didn't mention this

(continued, page 16)

to Rob, and Dennis thought it would be a good idea to surprise him. Rob tells me that this is his first award for CW. Rob has been an outstanding CW buddy and I have witnessed his willingness to keep working at his CW proficiency over those 10 months. He is now a very proficient ragchewer with both straight key (his preference) and homebrew paddle.

Whilst surfing through the FISTS Awards, I realised that I was quite close to getting the 2 Million sticker for my Millionaire award. I attained the original award in June 2013. Whilst I have worked quite a few ZL and VK FISTS members, there is a much bigger chance of working more members from the USA. I say this, as for me the 20m band is open more to USA than to UK. So far I have only worked three UK FISTS members. So it was a case of remembering to ask "Fists?" for every contact that I made. It was not long and I had my required number. Dennis K6DF accepted my log sheet and the 2 Million sticker was in the post and attached to my certificate.

Please excuse the fact that I am blowing my own trumpet in this regard, but hopefully some of you will have a look in your logs and see that you are eligible for some of the FISTS awards. Dennis puts a lot of his time into granting these awards and always sends a hand-written note with the certificate.

The arranging of my shack is an ongoing work in progress, but I think I have it all sorted out now (Well, until the next time!). I sit at the left-hand side of my desk and have my rigs in front of me. The other rigs and paraphernalia are to my right and angled in such a way for me to easily see them. This is important as one needs to be able to see the meters by a quick glance at the Linear and LDG tuner to make sure that you are putting out the required power at the lowest SWR. Also I have only kept out the paddles and keys that I use the most. The others have been put





(continued, page 17)

away until needed. I switched on all the radios for the photograph just to make it look "pretty!" The rear of the shack set up is still a tangled mess of cables etc, but one of these days I may make the effort to tidy them up.

A few days ago I was confronted with my laptop freezing up when I was using Ham Radio Deluxe. I couldn't understand why this was happening—it didn't matter what rig I was using, nor what antenna. So I rebooted the laptop and it happened again. Of course, I did my normal thing and put the blame on Bill Gates. But why had this suddenly started and why with different rigs and antennas? Something must have changed...

The only thing that was different was that I had been listening to some music on YouTube and didn't want to disturb my wife who was in the same room. I had plugged in some ear buds to the laptop. Surely this couldn't cause the laptop to freeze? But, I unplugged them and sure enough, the software was working 100% again! I mentioned this to some of my FISTS colleagues and Iain ZL2BJC (FISTS #12) said that the earbuds were acting as unscreened directional dipoles! You live and learn. I hereby apologise to Bill Gates for any cursing he might have heard from Hikuai.

My Ameritron 811A linear amplifier was built in 1991. So that makes it 24 years old. A few years ago I put in three Chinese-made (matched set) valves and they continue to work great. The previous valves were a bit old and the glue holding the tops on had gone brittle. But they were still good for about 300 watts out. (I have since reglued and soldered the tops and kept them as spares.) It puts out the 400 watts with a drive of 35 watts from my TS570. It has never given me any problems. However in the past few weeks the two lamps for the meters have blown on separate occasions. Well I suppose that I shouldn't

complain seeing as they have lasted 24 years and have survived the trip from USA to South Africa and then to New Zealand. Ameritron said they could supply me with the original type of lamps or I could update to LED's. I have chosen the old fashioned ones and they should be arriving in a week's time. I shall have to make sure that I have a steady hand when soldering! I had been worried that the lamps might be very difficult to get at, but that wasn't the case as the rear of the meter just pulled away from the face.



That's all for now, so here's to working you on the bands and exchanging FIST numbers.

Ian, ZL2AIM

(Reprinted with permission, from the *FDU Keynote*)

We need articles and reviews for The KeyNote!

NOTE: Image files need to be high resolution JPGs or 300 dpi TIF files at least 5" wide.

Send your Word or text files to keynote@fistsna.org

SPRINT INFORMATION

FISTS Sprints are a great way to meet other FISTS members, collect FISTS numbers, and have a lot of fun. We hope to work you in the next FISTS SPRINT.

OBJECTIVE:

To exchange specified information with as many FISTS members as possible using Morse Code only, and within the time frame stipulated.

PARTICIPANTS:

Any properly licensed amateur radio operator, FISTS member or non-member is invited to take part in the contest. At least one of the two stations in each QSO must be a FISTS member.

DATE AND TIME:

Fall SLOW SPEED SPRINT—runs from 1700 to 2100 UTC on October 3, 2015

Fall UNLIMITED SPRINT—runs from 1700 UTC to 2100 UTC on October 10, 2015

Winter SLOW SPEED SPRINT—runs from 1700 UTC to 21 UTC on February 6, 2016

Winter UNLIMITED SPRINT—runs from 1700 UTC to 2100 UTC on February 13, 2016

BANDS:

Operation is limited to the following amateur bands: 3.5, 7, 14, 21, and 28 MHz amateur bands. Look for other participants around the FISTS frequencies: 3558, 7058, 14058, 21058, and 28058 kHz.

Work stations only once per band.

ENTRY CLASSES:

There are three entry classes: Club, QRO, and QRP. QRO: Over 5 watts-100 watts output power. 100 watts is the maximum output power allowed.

QRP: 5 watts output power or less.

Club: (regardless of power).

Entry class MUST be shown on logs to be considered for entry in a particular class, or will be assumed QRO. An entry must be ONE class only, no combination of classes is allowed.

EXCHANGE:

The following information must be exchanged by both stations to count as a valid contest QSO:

FISTS members: RST, U.S. state/Canadian province/DXCC country, first name, FISTS number.

Non-FISTS members: RST, U.S. state/Canadian province/DXCC country, first name, output power.

DX COUNTRY STATUS:

U.S. states and Canadian provinces are those states and provinces that are contiguous and found within the North American continent. DX are those entities listed in the current ARRL DXCC publication, other than the above.

MULTIPLIERS:

Each U.S. state and Canadian province counts as 1 multiplier. Count each only once, no matter how many times worked. Each DXCC entity counts as 1 multiplier. Count each only once, no matter how many times worked.

SCORING:

Each QSO with a FISTS member: 5 QSO points. Each QSO with a non-FISTS member: 2 QSO points. Final score is total QSO points times multipliers.

CERTIFICATES:

Certificates will be awarded to the first, second, and third place finishers in each Entry Class.

LOG SUBMISSIONS:

All log entries must be received within 30 days after the Sprint to be considered valid. Logs not sent to the proper address will not be considered for entry. The logs will be spot checked for accuracy and correct scoring procedures.

All logs MUST contain the following information to be considered for entry: Your name and call sign. Club name if entry is for a club. Your FISTS number if a member. Entry class. Your claimed score. List of claimed multipliers. The entry form is the best way to record this information.

ELECTRONIC LOGS:

We accept electronic logs in standard Cabrillo format or ASCII text files. If you're not sure about your format, please contact me before the contest entry deadline. E-logs are sent to n2ed@fistsna.org ONLY.

PAPER LOGS:

Send log and forms to: FISTS Sprint Log, c/o Ed Wlodarski N2ED, 3 Shore Rd., Andover, NJ 07821-2240.

FISTS FALL 2015 SLOW SPEED AND UNLIMITED SPRINT RESULTS

Slow Speed QRO Category						Unlimited (QRO Catego	ry					
Call KNOWCW KE4COH WB0QQT W8JPF KO4OL K4DME	Bryan	State NJ SC NE OH KY VA	FISTS# 10000 7678 4239 17164 6583 16803	Total Qs 44 16 12 10 10 5	Score 4576 748 660 440 376 110	Call N2ED K5YQF W8JPF K4BAI AE4QQ K6DF	Name Ed Cecil Joe John David Dennis	State NJ TX OH GA GA CA	FISTS# 2454 8077 17164 2158 17368 3076	Total Qs 41 32 11 5 3	Score 4784 3045 550 125 125 45		
Slow Speed	Slow Speed QRP Category						Unlimited Club Category						
Call K3JZD KE5XV VE3FUJ W1WQG ON7AMI	Name Jody Bill Brion Bruce Jean Paul	PA N TX ON CT ON	FISTS# Non-Mem 7681 14268 13876 16669	Total Qs 17 8 6 5 6	Score 760 238 144 100 42	Call W2FAM W4FFF Unlimited (Name Phil Randy QRP Catego Name	State NY NC ry State	FISTS# 12650 9700 FISTS#	Total Qs 33 14 Total Qs	Score 2760 854 Score		
	•		1000)	O	12	W8JPF	Joe	ОН	17164	11	550		
•	Club Categ	•	EICTC#	Total Oc	Ceara	W9IHG	John	MN	9565	7	192		
Call W2FAM NC4RT	Name Phil Randy	State NY NC	FISTS# 12650 8280	Total Qs 22 8	Score 1414 222	VE3DTI Soapbox	Jose	ON	16062	2	20		
Soapbox					Call	Comments							
Call NC4RT	Call Comments					W2FAM	Conditions were poor. Not many FISTS members were present. Look forward to the next Sprint. Thanks to all for helping to put these events on the air. 73, K2NPPN & N2UC. Had a family get together I needed to go to, wish I could have stayed in the Sprint longer, maybe next time. I did get to work a couple of our newer members in the 17,000 series of numbers! Hope everyone had a good time.						
KO4OL	·					K6DF							
K3JZD	Pleasant event. Used 1 watt or less for all QSOs. Did not find any action on 20m—all						numbers! 73, Denn	-	•	d a good t	ime.		
	contacts w	ere mad	le on 40m	. Have app	olied for	W8JPF	Need more participants; at least ones that I can hear.						
ON7AMI	There was not so much activity for this one but perhaps in the future there will come more QRS stations trying their thing.					AE4QQ	First time for me, really enjoyed. Looking forward to next time.						
W2FAM	, ,					(Slow Speed Soapbox continued)							
						WB0QQT	My first Slow Speed Sprint. I really enjoyed it and plan to be back for the next one. Thanks to all that worked me.						
KE5XV	Fun contestgood signals, even the QRP ops!					W8JPF	First time tried running. Looking forward to						
K4DME	1st time, had some fun!						doing this		g. <u>1</u> 0	c.w.gjoi w			

FISTS SPRINT ENTRY FORM

Entry Class: QRO QRP				CLUB								
SCORING: QSO points X						nultiplie	rs =	final score				
CLUB Nam	e							FI	STS Clul	o #		
Name												
Address (St												
E-mail Add	ress (optic	onal)										
MULTIPLI	ER CHECK	-OFF LIST	Γ									
1	2	3	4	5	6	7	8	9	0	VE	DX	
СТ	NY	DE	AL	AR	CA	AZ	MI	IL	CO	NB	NF/LB	
MA	A NJ	MD	FL	LA		ID	ОН	IN	IA	NS	NT	
MI	Ξ	PA	GA	MS		MT	WV	WI	KS	PE	YK	
NH	I		KY	NM		NV			MN	QC	ВС	
RI			NC	OK		OR			MO	ON		
VΊ	-		SC	TX		UT			NE	MB		
			TN			WA			ND	SK		
			VA			WY			SD	AB		
Please enclo	ose paper l	logs ONI	LY, photo	os, comn	nents, id	eas, etc.,	with you	ır entry	and mai	l prom _l	otly to:	
FISTS Sprint Le Ed Wlodars 3 Shore Rd. Andover, N	ski N2ED	240										
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Date		Si	gnature						Ca	ıll sign		
Comments	:											

LETTERS TO THE EDITOR

EDITOR:

I enjoyed the article written by Dennis Franklin, K6DF reference Sounders and American Morse.

I know AMERICAN MORSE, but very rusty on the numbers, really never used them.

American Morse is still alive on the internet. If any member would like to use it or experiment with it go to MORSEKOB on the internet, and download the program (it is free). The program can be copied when set up with the sounder click/clack or a combination of that with the tones we are use to.

Wire 10 is the active wire where on many weekends from around noon until 3 pm the sound of American Morse is alive with individuals/or museums, although during the week they do have a net on the wire.

The program will convert the sounds on the screen to characters and if one wishes to transmit open/close the relay and type on the keyboard.

Once again enjoyed the article. 30's P. O'BRIEN, K8LEN #1494 Hello,

I got The Keynote today and the article on transcribing the Disney tapes reminded me that the original telegraph was designed to ink out the dots and dashes on paper tape for later transcription. The operators soon learned to copy the text by listening to the click-clack of the pen actuating solenoid.

I wonder if we should encourage hams to work CW using sending and receiving software while listening to the signal as a way of learning CW. It could actually be fun. When I learned CW there was the 5 WPM requirement and then the rather brutal requirement to upgrade to 13 WPM in a year or QRT. I was fortunate that I was still in high school and had the time to spend on the air bringing up my speed.

I also work the digital modes and now wouldn't think of operating CW without a waterfall display (I use Fldigi). I learned CW before narrow filters were available and just don't like the sound of them (the Heath Q-Multiplier just didn't cut it). Using the SSB filter and a waterfall display one can see the off-frequency QRM making it much easier to ignore. Also the display allows more accurate zero-beating and helps in finding the holes in DX pileups.

Larry, KG4Q #1607 (First licensed 1957) Sent from my 13 year old Dell running Linux Mint 17 (even my computer is a senior citizen).

FISTS PHOTOS



This was my license plate when I lived in Las Vegas Nevada in the 1970s. I was a Radio Electronics Officer on Exxon's tankers for 18 years. I spent 22 years on ships as [a] Radio Officer mainly CW. I still use CW today and enjoy talking to FISTS operators. Hope to see you on the air. DITDIT.

73, Dick K6KSG #8589



Here is a cool shot from northern Wisconsin, taken on a vacation about 15 years ago. Yes, I ran HF CW mobile! And the sign for Morse, WI was too much to pass up!

Paul Goemans, WA9PWP, Stoughton, WI

TO JOIN OR RENEW YOUR FISTS MEMBERSHIP

If you live in North, South or Central America, you may join the Americas Chapter of FISTS. Membership is open to all people interested in Morse Code, irrespective of their speed and ability. You can download a North membership application American http://fistsna.org/pdfdocs/nafists.pdf or use the application form on the inside back cover of The KeyNote. You can also have an application e-mailed to you by sending your name address to Jim Ranieri, aa9ls@turbotoads.com, or mail a SASE to Jim at 33778 Rebecca Rd., Kingston IL 60145 and Jim will send you an application via return postal mail.

The membership fee to join or renew is \$10.00 per year. This includes having *The Key-Note* mailed to you. You may join or renew for up to 5 years at one time. Family members of a current dues paying FISTS member may join and receive a membership number without paying additional dues, but only one issue of *The Key-note* will be mailed to a household.

The membership fee to join or renew as a regular member and receive *The KeyNote* electronically (PDF file) is \$10.00 per year. Again, you may join or renew for up to 5 years.

FISTS numbers are not reassigned, so if you had a number in the past and renew your membership, you will retain the same membership number.

If you are age 80 and older, or under age 18, or have a family membership, membership is free. If you qualify for a free renewal, please drop Dennis K6DF a note by email or by postal mail around the time of your renewal each year. Let us know you are still interested in CW and FISTS so we can update your membership info and keep you on the Active Members List.

To join or renew, send a check or money order with your membership fee, along with your membership application, to Dennis Franklin K6DF, 4658 Capitan Drive, Fremont, CA 94536-5448. Please make checks payable to "FISTS CW Club." Include your call sign and FISTS number (if you are currently a member) on the memo line.

If you wish to pay your membership fee using PayPal, go to http://fistsna.org/howdoi.html. Use the proper PayPal box (JOIN or RENEW) to select the number of years you wish to Join or Renew. Enter your CALL and NAME to JOIN or enter your CALL, NAME, and FISTS Number if RENEWING in the space provided. For the over 80 or under 18 age groups, also include your date of birth, please. Be sure to include your home mailing address if it is different from the one you use for PayPal. Then click "Pay Now."

For non-US applicants and renewals, please make sure checks, money orders and PayPal funds are in USD (US Dollars).

Members that elect to receive their newsletters via on-line download will be send a User ID and Password from the newsletter server once their membership application has been processed. Links to change or reset your password are available on the main page of the Americas website http://fistsna.org.



FISTS CW CLUB Membership Application/Renewal



For North, Central, and South America including all territories and islands.

Call sign	NEW Member or Rene	wal, Enter FISTS #
Name		
Address		_City
State	ZIP+4	_Phone
Rig (optional)		
Other club affiliations (optional—AAR	L, RSGB, etc.)	
A User Name and Password will be sen On-Line Newsletters as well as Member E-Mail	r Only Areas of the FISTS CW	Club web site.
	nclose annual dues of \$10 per y	ear in U.S. funds. Example\$10 for one year,
Regular Membership-\$10 per year (We encourage members to elect to down		
☐ Family Membership-FREE—Please	e provide the Name, Call, and F	ISTS # of the dues paying family member.
Name	Call	FISTS #
Under Age 18-FREE Membership-	-Birthdate Required mm/yyyy	
Over Age 80-FREE Membership—	Birthdate Required mm/yyyy _	
Signature	D	ate
Please make checks payable to "FISTS Opennis Franklin, K6DF, 4658 Capitar		*E-Mail required

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Send in your stories and photos for *The KeyNote*!

When you've worked a FISTS, you've worked a friend.

