

TEN-TEN INTERNATIONAL



## The Ten-Ten International News

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News items should be sent to the Editor. Technical articles and information on all 10 meter activities or news are welcome and solicited. All copy submitted must be typed, and sent on computer disk or E-mail. Suitable formats will be provided upon request.

Photographs are encouraged. Black and White or Color are acceptable. Include complete information on the back of each photo. Attach a label or other suitable paper to the back of the photo and write all information on the label, not the photo. If sending digital images, high resolution of a minimum 300 dpi must be used. Please do not send newspaper or digitally printed photos as they cannot be used.

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E-mail: editor@ten-ten.org
10-10 CHAPTER ACTIVITY REPORTS: Should be sent to the Chapter Coordinator ADDRESS CHANGES: All members should send address changes to the Data Manger NOTE: 10-10 IS NOT RESPONSIBLE FOR POSTAL SERVICE DIFFICULTIES

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# From the Editor 

Happy New Year! I wish all readers a great 2023 with a lot of radio contacts, especially on 10 meters. I'm looking forward to increasing activity on 10 meters as we move through the year. Hopefully that will translate into more material for this newsletter.
In this issue there are two articles that were submitted by one of our members: Carl Luetzelschwab K9LA \#41258. He has submitted one article on constructing a QRP Transceiver and another article on cycle 25. Thanks Carl, for sharing your experiences. It is a pleasure to see these types of articles submitted for this newsletter. The newsletter feels a bit more personal when members share their stories and experiences with everyone else. We need more just like it.
I say welcome to two members who have decided to volunteer for a stint on the board of directors. Dave Ruch who took on the additional responsibility of leading our board and Chuck Dockery who is now a director-at-large. Both Marcus Lieberman and George Davenport decided to re-up for another twoyear stint as directors. I wish all members of the board all the best and thank you all for volunteering to help keep the Ten-Ten International Net moving forward.
Well, we have a whole new year of 10-meter activity scheduled and I for one, plan to participate in as many QSO parties as I can. I was very disappointed in the Fall CW QSO Party, as I could not hear one dit or dah all the time I was on, listening and tapping out CQ 1010. But the Fall Digital did give me a bit more to work with. Numbers were still low, but it was great to exercise the old PSK31 software and make the contacts I could. Let's hope this year will be a giant step better than last year. I hope to catch you on 10 meters.
Randy - AJ7B \#7675


David Ruch NFOJ
\#19553

Greetings and happy Cycle 25! My name is Dave, NFØJ, and I am the newly elected president of Ten-Ten International. I live in Elephant Butte, New Mexico, with my wife of over 50 years, Annette, WDØFEU. We have both been hams since 1977, are both Ten-Ten members, and both of us are lifetime members of the ARRL. (Pretty cool not to have to explain the cost of or need for that new rig.) We recently moved here from Minnesota and are still getting settled, so no permanent antenna is in place. Our location is high desert with no trees to speak of. A tower installation (delayed by supply shortage) is planned for 2023.

Ten meters is (and always has been) my favorite band. As soon as I discovered Ten-Ten, I joined. Early on, the 10-meter band was wide open, so it was easy to work the world with just a few watts. With my friend David, WBØYUC (SK), we spent hours calling CQ on ten collecting numbers and giving out ours. I collected wallpaper like there was no tomorrow and created many pages of paper logs back before PCs were commonly available. (Unfortunately, all my logs and certificates were not found after our move to New Mexico. Major bummer.)
What about the future? Now that we are in Cycle 25, 10-meters is getting active. Openings are becoming more and more common. So, how can we take advantage of this? Not in any order, some of my thoughts are: (1) Get new hams (especially Technicians) aware that they can work the world on SSB, CW, and digital on ten. As an experiment, I will create a handout for newly minted hams at my local radio club to encourage them to get on 10-meters and join Ten-Ten. (2) Get old timers back on ten. (3) Re-open chapters and create new ones. Active chapters create activity. (4) Continue and increase presence at hamfests (especially small ones). I will attend as many as possible. Let's get the word out. (5) Continue friendship and encouragement that our members have always shown to newcomers. (6) Get to know and use (and maybe become) YouTube influencers. What about you? What are your thoughts about promoting and building our organization? Let me hear from you.
I wish to give a big thank you to Mel, KD5DE, for his leadership and
dedication, especially during some very difficult times. His encouragement and help in getting me up to speed during the transition (and after) are very much appreciated!
As this is written, I am still over a month away from assuming the day-to-day activities as President. I have big shoes to fill and a lot to learn. I ask for your help and patience. Your comments and suggestions are appreciated. Please feel free to contact me via email, phone, or snail mail.

Lastly, Ten-Ten International will be represented by W5SUM, K5PLH, and me at Hamcation 2023, February 10, 11, and 12. Stop by your organization's booth to say hello and show your support. I look forward to seeing you in Florida (and on the air)!
73,
Dave NFØJ \#19553

## Ten-Ten International VP Program

What is the VP program and how do you become a VP? These are two popular questions that are asked by most all new members. First, I will cover how to become a VP. There are many 10-10 awards that a new member can pursue and one of them is the VP Certificate. Bar Awards are issued for every 100 contacts collected and sent into the Bar Manager. Once a member obtains his/ her 500 Bar Award they are automatically assigned an honorary VP number and become a member of the "International 500 of the World club." Once a member obtains his/her VP number they are then eligible to start collecting VP numbers toward a VP Bar Award Program. It works similar to the basic bar award program in that one must collect 100 at a time and submit to the VP Manager for VP bar awards. That really is all there is to it! Very easy to do as long as the 10-meter band cooperates with us.
What is the VP Program/How did it get started? Now, this is a bit tougher to answer. I took the Bar Awards/VP/Lucky 13 program over in 1998. A number of changes have occurred since then. Most of those changes have been cosmetic by implementing an E-Bar Award which replaced the printed one and from $99.9 \%$ of the members, they like it much better. The VP Certificate has remained pretty much the same as when I took over. I also implemented the E-VP Certificate and the E-Lucky 13 Certificate. All are sent via email in PDF format. When I assumed these duties there was virtually no information about the VP program other than how to become a VP. No historical data at all! I guess with the progression of passing the responsibilities from one person to another the historical data either was not kept up or lost along the way. I checked the Newsletter/Bulletin archives that were issued and tried to find as much information I could about the program and how it got started. From what I can decipher Frank Orcutt, W4JO, 10-10\# 386 was the Founder of the VP
program. It started May 5, 1971. What you may find interesting is, it started out as a $100 \%$ AM group eventually changing over to SSB. The main frequency was 28.800 later changed to 28.6 using SSB. It was known over the air as the 'VP Club.' Evidently, they held annual VP contests starting in 1971. In a 1975 VP bulletin put out by W4JO, he mentioned that the annual VP contests were so popular they were going to continue them indefinitely. It was also mentioned for VP-100 applications that each VP contact listed in the application was made in a "VP Region" of the band between 28.500 and 28.550 . I could not find when this started nor could I find when it ended and/or changed. Neither could I find when the VP annual contests terminated. The VP Program back then was separate, financially from the 10-10 organization, although it was a part of 1010. Back then, each call area had their own Bar/VP Managers. Frank Orcutt passed away in January 1979 and I think the VP contests may have ended somewhere around that time frame. Nothing more was mentioned about them that I could find. I do know that at least up until 1986 or 1987 time frame the Bar/VP Managers were still separated. So, each call area assigned the 10-10/ VP numbers. If I'm not mistaken a group of numbers was given to each of those managers from someone who kept up with the main database.
So, there you have it. A brief explanation as to how to obtain a VP number and a short but somewhat limited explanation as to how the VP Program got started. If there is anyone out there that may have any additional information, please send me an email. Also, I have the Master VP Database and I have been trying to fill in many dates of issue that are missing. If anyone has a VP number less than VP\#2000 and knows your date of issue, please let me know. Thank you.
Dan Morris KZ3T VP-1791
dbmorris315@gmail.com

## NEW LIFE MEMBERS

| 03885 | AD4K | Steven C Roth | FL |
| :--- | :--- | :--- | :---: |
| 07675 | AJ7B | Randy E Mather | WA |
| 66166 | KE4DER | William A McCoy | NC |
| 78026 | WA4GQJ | Angel A Moreno Fergusson | FL |
| 78034 | W4FVB | Fredrick Brock | AL |

10-10 Has One Official Daily Net 28.380 MHz

Net Starts At $\mathbf{1 8 0 0 z}$
Every Day Except Sunday
Listen And If You Can Hear Us Join IN!!!


> Were you first licensed 25 years ago and licensed today?

## Then you should join the Quarter Century Wireless Association, Inc.

To Join or Renew, Visit: http://www.qcwa.org/join-renew.php

## For more information, please contact: om@qcwa.org



## GENERAL NEWS

1) Hello Ten Ten International. I am your new chapter coordinator. My name is Charles Dockery (Chuck) N7UQ 72774. I have some mighty big shoes to fill and it will take some time to get up to speed with the tasks at hand. I'm asking for patience as I travel down this new road, thank you to all in advance for your understanding. As the new cycle begins to warm, I am anxious to hear old friends and new members on the air. Thank you for your time and remember "You have to make contacts to get results". You can either use the website forms for updating your chapters or contact me direct at chuck@ n7uq.com or 112 S. Rolling Meadows Dr. Wylie, TX. 75098, 469-829-5462
2) All CH/CM: Please double check the TEN-TEN Net Guide to be sure your net(s) are listed correctly. If there are changes, be sure to let me know so I can update the list.
3) Reminder of Quarterly Reports Due: In Extremis (no report in over a year): Chief Seattle, Fort McHenry/ Cornerstone/Yodar Kritch, Major League Baseball, Speedway, Tango. Past Due (no report received during the prior quarters when due): Bauxite, Down Under, New Mexico Mud Ducks. Reports received after November 27 (date of this report) are not included here and will be acknowledged in the Chapters section of the 10-10 website.
Chapter Reports Due during first quarter 2023: Branding Iron (February), Route 66 (February). Note that Quarterly Chapter Reports may be sent any time. The months indicated here are the dates in 2022 in which the last report was received.
4) See www.ten-ten.org/index.php/resources/ten-ten-documents/ten-ten-forms for a form to download or www.ten-ten.org/chapters/quarterly-report to fill out and submit electronically. Be sure to notify IT Manager Jeff, N7YG, before using this easy-to-use form so he can add you to the Chapter Management Group. If you do not have internet access, let me know and I will send you a blank form that you can copy and submit.

## CHAPTER NEWS

1) Since Robert, KA5VVD, became SK, the Branding Iron chapter is still without a Chapter Head. Peter, DL6DK, has agreed to continue as CM, but we need someone to come forward to become CH . Anyone willing to do so, please contact me.
2) Down Under CH Bob, ZL1AFU, reports that there are no longer sufficient 10-10 members in New Zealand to qualify potential new members for their own number. Now that propagation is beginning to improve, point your antenna toward the South Pacific and help them out.
3) All chapters are asked to plan for succession of leadership. To aid in such planning, IT Manager, Jeff, N7YG, has been setting up FTP accounts on the 1010 server where chapters can save their data. All CH: contact Jeff for the details if you wish to take advantage of this opportunity.
4) Chapters below accept email upgrades as of November 27. All the listed chapters generally need previous, new and total points and seals claimed. Any transaction with the CM that requires that a certificate be issued, and most worksheet specials, should still be handled via US Mail. Also, it is good practice to keep a detailed listing of the upgrade in case the CM should require verification. Requirements peculiar to a particular chapter are noted.
(** indicates change)
Bauxite - CM K5BKT, k5bkt@nwla.com. Bauxite and Arkansas Visitor numbers only.
Bay Area - CM K6RDK, k6rdk@arrl.net
Branding Iron - CM DL6DK, bic-cm@voits.de
Castle Craig - CM N1API, n1api@cox.net
Chesapeake Bay - CM N3TGB, n3tgb@aol.com
Down Under - CM ZL1AFU, zl1afu@nzart.org.nz
Fort McHenry/Cornerstone/Yodar Kritch - CM K3TUJ, k3tuj@juno.com Hanse - CM DL5HAN, dl5han@t-online.de
Houston S.H.O.T - CM N5MT, n5mt@aol.com
Louisiana Pelican - CM N5MT, n5mt@aol.com
Major League Baseball - CM N6OPR, n6opr@msn.com
New Mexico Mud Ducks - CM KM5EH, buckml@lobo.net
North Georgia - CM W4GKF, 10X@chazcone.com
Oregon Trail-CH/CM K7QXG, k7qxg2@gmail

Steamboat Plus - CM KD5DE, kd5de@nwla.com
If any chapter not listed accepts email upgrades or if the email listed has
469-829-5462

## TEN-TEN NET GUIDE

As of December 15, 2022

| DAY | ZSUM | ZWIN | Chapter Name | Location | Freq | DAY | ZSUM | ZWIN | Chapter Name | Location | Freq |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SUN | 0001 | 0100 | Chesapeake Bay | Chestertown, MD | 28345 | WED | 0100 | 0200 | Cincinnati Area Ten | Cincinnati, OH | 28430 |
| SUN | 1300 | 1400 | Arlington | Arlington, VA | 29200 |  |  |  | Tuners |  |  |
| SUN | 1400 | 1500 | Neanderthal | Euskirchen, DL | 28355 | WED | 0100 | 0200 | Houston SHOT | Houston, TX | 28488 |
| SUN | 1800 | 1800 | Major League Baseball | Gilbert, Az. | 28380 | WED | 0200 | 0300 | 10-Bar-X | El Paso, TX | 28445 |
| SUN | 1900 | 2000 | Oregon Trail | Dallas, OR | 28330 | WED | 1400 | 1500 | EU DX/Branding Iron/ | Bergkamen, DL | 28355 |
| SUN | 1930 | 1930 | North Georgia | Atlanta, GA | 28415 |  |  |  |  |  |  |
| MON | 0100 | 0100 | Arizona Desert | Phoenix, AZ | 28445 | WED | 1930 | 1930 | Route-66 | Apopka, FL |  |
| MON | 0100 | 0100 | Lonestar | Arlington, TX | 28460 | THU | 0100 | 0100 | Cow Town | Arlington, TX |  |
| MON | 0100 | 0200 | Milwaukee | Milwaukee, WI | 28365 | THU | 0100 | 0200 | Gateway | St. Louis, MO | 28650 |
| MON | 0130 | 0230 | Bauxite | Benton, AR | 28470 | THU | 0100 | 0200 | Milwaukee | Milwaukee, WI | 28365 |
| MON | 1630 | 1730 | Chief Seattle | Seattle, WA | 28430 | THU | 0230 | 0230 | Windfarms | Livermore, Ca | 28485 |
| TUE | 0001 | 0100 | Ft McHenry/Cornerstone/ Yodar Kritch | Arbutus, MD | 28370 | THU | 0230 1930 | 0330 1930 | Up the Crick Speedway | Eugene, OR <br> Rainer, OR | 28450 |
| TUE | 0100 | 0200 | CO Centennial/CO Frontier Gang | Lakewood, CO | 28340 | FRI | 0001 | 0100 | Ft McHenry/Cornerstone/ Yodar Kritch | Arbutus, MD | 28370 |
| TUE | 0100 | 0200 | City of Lights | Aurora, IL | 28150 CW | FRI | 0001 | 1000 | Steamboat Plus | Shreveport, LA | 28430 |
| TUE | 0130 | 0230 | Bauxite | Benton, AR | 28470 | FRI | 0300 | 0400 | Chief Seattle | Seattle, WA | 28430 |
| TUE | 0130 | 0230 | City of Lights | Aurora, II | 28720 | FRI | 2230 | 2130 | Down Under (Summer | Auckland, ZL | 28530 |
| TUE | 0300 | 0400 | Bay Area | Hayward, CA | 28475 |  |  |  | in NZ is winter in US) |  |  |
| TUE | 0430 | 0430 | Aloha | Hilo, HA | 28490 | SAT | 1510 |  | Louisiana Pelican | Baton Rouge, LA |  |
| TUE | 1500 | 1600 | New Mexico Mud Ducks | Albuquerque, NM | 28835 | SAT | 1730 | 1730 | Tango | Buenos Aires, LU | 28650 |



We had a good Fall DX season and the ARRL Ten Meter Contest is in ten days. The predicted solar flux for the contest is $125-130$, so get ready for more DX on Ten.
There has been 43 ARRL Ten Meter contests since I have been licensed and I have found many DX members in this contest. Because we are in the early years of Cycle 25, I expect that propagation will be better than the past five years for this contest. So pleased make contacts in the ARRL Ten Meter contest on Saturday and Sunday, December 10-11th
At my station, my main antenna is a multi band vertical with a resonated frequency set for Ten SSB to get full power out. When I operate FT8 on Ten, the SWR is low and the radio get lots of power out on digital and CW to work the DX. My most recent 10-10 project has been updating my 10-10 Bar awards using data saved in my old Win1010 logging program. I recently received the 1000 Bar \#1582 which means our new 1000 Bar award manager, Rob Cromer KEOMIZ \#77647, is officially working on his new job. I saw in the last issue of the News that his name was printed with his email address for award applications. Thanks Rob. You can find award forms on the Website if you need to print or download. I am slowly sending in Bar applications since I have several thousand members logged over the past 40 years! My first 1010 logging program 32 years ago was by Jim Hardy in 1990. But my first 11 years of logging QSO data was done on an IBM main frame with punch cards! So when a logging program became available, I had a lot of old QSO data to retype into the DOS program which became my standard for collecting 10-10 numbers and DX. Many years ago I received my 500 Bar and got a VP \#950. In 1998 Jim converted his DOS program into a Windows program and I began logging contacts with the new Win1010 program. Now that Jim is SK, 10-10 is hoping to get access to the program to maintain its use as a 10-10 asset. Steps have been started to do that task. Let's hope this update works or else the program will probably become obsolete as new Windows updates from Microsoft could render the program useless!
All members are having fun with the rise in the solar flux due to more
sunspots! The Sun gave us a solar flux high in mid-September of 154 but the max high of 180 was in May 2022. So far we have been lucky that no Major solar flares have come off the Sun to cause a radio blackout.
All dues paid up members can submit a QSO Party log and apply for all 1010 awards. Forms and membership renewal info are at the website. You do have to swap your 10-10 number over the air on Ten to qualify for all awards! If you are collecting 10-10 numbers, DX, Counties, Bars or you want your score to count in a QSO party, you are required to exchange your callsign, name, state and 10-10 number on Ten over the air. So record/save your QSO info in a logging program or use a paper log book. Then when you are ready to fill out the award application, move your 10-10 info from your saved place to your award form. The honor system does apply for all contacts on 10-10 awards. I keep many DX records for award validation as the Countries award manager. So look through your 10-10 log and find the required 25 different countries with a member and fill out a Countries award form. Then send it to the email address on the form. As of today, there remain 22 countries that have not been worked for 10-10 country credit of the 340 available by ARRL DXCC rules. Its has been about six years since the last new 10-10 country was added to the worked list.
I just learned a member yesterday became SK during a medical procedure. Rod W7OM \#72366, who is in my log many times on SSB and FT8. Here is some history:
http://nciweb.com/features/novdec14feat.pdf RIP.
Countries Award: There were no Countries Award applications submitted this past quarter.

## GENERAL 10-10 DX REPORTED IN THE PAST QUARTER:

3B8 Mauritius. I found no info that Mart DL6UAA \#54230 operated 3B8MM as printed in my last DX news.
4 U United Nations. The club station 4U1UN \#55555, in the New York UN building, was active this past quarter. The remote HF station was used and the Ten meter beacon was heard on CW.
4U UN Switzerland. 4U1ITU \#11111. There was a lot of ham radio from the club station. The building was supposed to be closed for maintenance but plans must have changed since 4 U1ITU was on FT8 worked in the US about 1300 UTC in November.
DU Philippines. Irek SP3SUX \#62262 was using callsign DV8/KH7EA at the end of Nov until December 3rd. In the CW WW DX CW contest his call was DX8H.

EY Tajikistan. Nodir EY8MM \#52767 has been active about 10\% of his time on Ten FT8 no SSB. Most of his HF time is on the lower bands. Good luck.
FJ St. Barthelemy. Phil K2LIO \#7746 was back in St.Bart in mid October using his new call FJ4WEB. His new radio is an IC-7300 and a better antenna on Ten. This is a rare $10-10$ location. Phil is the first member to stay on the island for long periods.
I Italy. Elvira IV3FSG \#54292 was using FT8 a lot on Ten the past three months. It's hard to swap 10-10 info on FT8 so hope to find her on SSB this winter. LoTW.
J6 St. Lucia. Bill K9HZ/J68HZ \#2618 was back at his summer place until November 2nd. When not in a contest he likes to operate FT8. He is back in Texas now.
JW Svalbard. Hal W8HC \#12502 and friends operated club station JW0A from Svalbard from September 19-29th using three setups on CW, SSB and FT8.
KH8 American Samoa. Alan K7AR \#2736, was on the island in November with W7YAQ who was not a member.
P4 Aruba. John W2GD \#14109, was back on Aruba again for the CQ WW CW contest as P44W the last weekend in November. LoTW.
TA Turkey. Berkin TA3J \#74303 was mostly on 12 Mtrs but also on Ten until November 13st from Yassica Island. All modes and FT8. LoTW.
V3 Belize. Scott K5PS/V31CQ \#52535, was in the CQWW CW contest the last weekend of November and went home after the contest on Nov 28th. LoTW.
VP5 Turks' \& Caicos Isl. Ron N4KE \#5645 used callsign VP5DX from October 20-30th. The radio was only 100 watts into a vertical on SSB, CW and FT8.
VP8 Falkland Isl. Bob VP8LP \#8854 was mostly operating on Ten SSB from August to November. No LoTW.
Z6 Kosovo. Rene DL2JRM \#69623 was back in Kosovo using call Z68XX until November 1st when he returned to Germany. His 100 watts into a vertical were tough to hear. No info on future trips.
ZF Cayman Islands. Jim WB2REM \#48365 is still on the big island using his ZF2OO callsign until January 2023. He was on Ten SSB and FT8 in late November. LoTW.

## UPCOMING DX \& NEW 10-10 ACTIVITY:

3D2 Rotuma. Tony 3D2AG \#72719 is now back on Rotuma until December 20th on CW SSB RTTY and FT8.
3Y Bouvet Island. A DXpedition to Bouvet is now planned for January to February 2023, to activate the \#2 most wanted country. The only member going
is Bill KO7SS \#8631. In 1990, Bouvet was a first time country for 10-10. This DXpedition will be an expensive trip, so take note and be ready. This is quite rare for 10-10, so good luck.
9M West Malaysia. Rich PA0RRS \#24343 will be using callsign 9M2MRS from January 2 to March 27, 2023. NO SSB, only CW or FT8 around 28091. Working him on Digi and swapping a 10-10 number will take luck and effort!
CYO Sable Island. The big DXpedition to Sable Island has been rescheduled to March 20-29, 2023. Website: www.CYOS.com. There will be two members on this trip: Bob K4UEE \#75256 and Dan W4DKS \#5395. Sable island is now a remote weather station for Canada and does not keep anyone on the island for WX station keeping. The ham operators are going to be able to rent Sable facilities where they can stay and operate but the cost is high! The only permanent residents on Sable are the 500 horses and seals that have to be protected from visitors. Travel to Sable is only by permission, and by an airplane landing on the beach or helicopter. Paperwork for DXCC credit has been approved by the ARRL as of today. Good Luck. LoTW.
FP St. Pierre \& Miquelon IsI. Eric KV1J \#31247 is planning on a June-July 2023 trip to operate as FP/KV1J.
HC8 Galapagos Island. James WB2REM \#48365 and friends are planning a March 1-11, 2023 trip to the island. All bands, modes and digital FT8. LoTW.
PJ2 Curacao. Andreas DK5ON \#54260, will be on Curacao Island from March 4-22, 2023. All modes, LoTW.
VP2M Montserrat. Thaire W2APF \#50022 will be using call VP2MDX from January 2 to March 31, 2023.

## MISCELLANEOUS ITEMS \& NOTES:

TenTen Website: https://www.Ten-Ten.org
Propagation forecast: http://www.solen.info/solar/,
www.SolarHam.net and http://ARRL.org/Propagation.
More propagation: http://dx.qsl.net/propagation/.
DX Calendar: http://www.dxwatch.com/.
DX: http://www.youtube.com/watch?v=k4dJcK-WVRw.
DXCC Most Wanted at: https://Secure.Clublog.org/mostwanted.php.
ARRL DXCC http://ebarc.org/pdf/dx-entity-history.pdf.
Ham Lookup various ways:
http://Haminfo.tetranz.com.map.
Ham LoTW users: http://www.hb9bza.net/lotw-users-list.

## NEW: WM7D Solar Values:

https://www.wm7d.net/hamradio/solar/

## FT8 Fox/Hound Video:

## https://www.YouTube.com/watch?v=GcbtTKSRkus

Download the DX'ers Handbook by Bryce Anderson K7UA/SK, at: www. K7UA.com.
Propagation: I expect the solar flux to range from 99-136 during the
Winter, with a small rise of flux. The 2022 Winter Solstice is Wednesday December 21st, and winter starts for us in the northern hemisphere. The Earth is tilted as far away from the sun as possible, giving us the shortest days of the year and in the southern hemisphere, Summer starts. Cycle 25 started on November 17, 2019 and the Sun is giving us a rising solar flux. NOAA predicted a flux of 130 for 2024 but this year we have seen a high flux of 180 . Sunspots are counted by looking at the Sun but solar flux is by radio at 2.8 GHz .
The 2022 monthly maximum solar flux: Jan was 130, Feb 130, March 151, April 166, May 180, June 149, July 176, Aug 128, Sept 154, Oct 163 and Nov 142. Average 152.The 2022 monthly minimum solar flux: Jan was 84 , Feb 93 , March 94, April 96, May 98, June 96, July 91, Aug 95, Sept 116, Oct 105, and Nov 108. Average 98.
On December 1st, the solar flux was 111, the $A$ index was 24 and $K$ index was 4 . There have been many sunspots on the Sun in the past nine months with increased solar flux up 10-15+ points. The USAF solar flux forecast for December 1st to January 14th is from a high of 130 to a low of 95 with an average flux at about 113.
My Prediction: Over the next three months, the best conditions on Ten could be: Dec 06-11th; Jan 1-6th ; Feb 1-6th; and March 1-6th. For the USA, expect a $65 \%$ chance of DX to Europe/Asia and $75 \%$ to S. America or Pacific. Use the beacons 28.175-28.300 MHZ to find if the band is open and especially FT8 on 28074.

Three new DX members joined in Sept to Nov 2022. Sept: Andreas DL3ABD \#78020; Oct: Yves F5JJA \#78030; and Nov: Ray G0LRH \#78041. The highest 10-10 issued in November was to Mike N6ZGK \#78043.
Thanks to the Daily DX by Bernie W3UR \#25731 and the ARRL DX Bulletins. This DX News edition is my number 128th of DXing reports for the past 32 years. DX news to: Mike Davidson, 26274 Whispering Pines Ave, Denham Springs LA 70726 USA and Email: N5MT@aol.com .

## 10 Meter Beacons

As 10 meter operators one should be aware that propagation beacon frequencies are coordinated.
I would appreciate a message from anyone with thoughts of activating a beacon. wi5v.be@gmail.com
73 Dennis Stice WI5V \#35806
IARU Region 2 HF Beacon Coordinator
https://wi5v.net/author/wi5v

## QSL Bureau News

The QSL Bureau manger, Jim Stoeber WI9X \#49635 became a Silent Key. Contact Mel Sojka if you are interested in managing QSL cards for the 10-10 International Net.

ARTICLES
If you have a Ten-Ten related adventure/experience you think would be good to share with the other members of the Ten-Ten International organization, please send your story to editor@ten-ten.org.







| 2022 Fall DG QSO Party |  |  |  |  | KM4ODS | 77504 | 12 | 9 | 33 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| November 12-13 |  |  |  |  | AK4YS | 75328 | 8 | 1 | 17 |
| TOP TEN |  |  |  |  | N3GTY | 50585 | 8 | 1 | 17 |
| CALL | 10-10\# | CTX W | CTX WO | TOTAL | KA5VZG | 46596 | 5 | 0 | 10 |
| 1. W5SUM | 2019 | 20 | 2 | 42 | KK4AMR | 76031 | 2 | 1 | 5 |
| 2. KZ3T | 41015 | 13 | 9 | 35 | NC4GK | 77965 | 1 | 0 | 2 |
| 3. AJ7B | 7675 | 15 | 3 | 33 | CALL AREA 5 |  |  |  |  |
| 3. KM4ODS | 77504 | 12 | 9 | 33 | CALL | 10-10\# | CTX W | CTX WO | TOTAL |
| 4. KM5EH | 71103 | 14 | 2 | 30 | W5SUM | 2019 | 20 | 2 | 42 |
| 5. KA7IVB | 36769 | 13 | 3 | 29 | KM5EH | 71103 | 14 | 2 | 30 |
| 6. KD5DE | 33513 | 12 | 2 | 26 | KD5DE | 33513 | 12 | 2 | 26 |
| 7. KD5ILA | 77652 | 11 | 3 | 25 | KD5ILA | 77652 | 11 | 3 | 25 |
| 7. W2VTV | 71275 | 9 | 7 | 25 | N5MT | 24949 | 9 | 2 | 20 |
| 8. K7QXG | 5956 | 10 | 2 | 22 | N7UQ | 72774 | 3 | 0 | 6 |
| 9. N5MT | 24949 | 9 | 2 | 20 | KM5FF | 50356 | 2 | 0 | 4 |
| 10. AK4YS | 75328 | 8 | 1 | 17 |  | ALL AR |  |  |  |
| 10. KD2NOM | 77596 | 8 | 1 | 17 | CALL | 10-10\# | CTX W | CTX WO | TOTAL |
| 10. N3GTY | 50585 | 8 | 1 | 17 | AJ7B | 7675 | 15 | 3 | 33 |
|  |  |  |  |  | KA7IVB | 36769 | 13 | 3 | 29 |
| CALL AREA ORDER |  |  |  |  | K7QXG | 5956 | 10 | 2 | 22 |
| CALL AREA 1 |  |  |  |  | WOFLZ | 48658 | 7 | 1 | 15 |
| CALL | 10-10\# | CTX W | CTX WO | TOTAL | WA7SKG | 77548 | 6 | 0 | 12 |
| N1API | 25468 | 8 | 0 | 16 | CALL AREA 9 |  |  |  |  |
| NM1W | 41721 | 6 | 0 | 12 | CALL | 10-10\# | CTX W | CTX WO | TOTAL |
| CALL AREA 2 |  |  |  |  | AI9IN | 76189 | 2 | 0 | 4 |
| CALL | 10-10\# | CTX W | CTX WO | TOTAL |  | QRP |  |  |  |
| W2VTV | 71275 | 9 | 7 | 25 | CALL | 10-10\# | CTX W | CTX WO | TOTAL |
| KD2NOM | 77596 | 8 | 1 | 17 | AK4YS | 75328 | 8 | 1 | 17 |
| WA2HMM | 40510 | 7 | 2 | 16 | LOW POWER |  |  |  |  |
| CALL AREA 4 |  |  |  |  | CALL | 10-10\# | CTX W | CTX WO | TOTAL |
| CALL | 10-10\# | CTX W | CTX WO | TOTAL | W5SUM | 2019 | 20 | 2 | 42 |
| KZ3T | 41015 | 13 | 9 | 35 | KZ3T | 41015 | 13 | 9 | 35 |
| ww.ten-ten.org | TO |  |  |  |  | Daily N | 28.380 MHz | at 1800Z (e | ept Sund |



## A Homebrew QRP 10-Meter Transceiver

In January 1989, when I was working as an RF design engineer for Magnavox (it eventually turned into Raytheon), I decided to build a QRP 10 -meter transceiver for home station use. I did it during my lunch hours, and it took about 4 months.
The goals were to make it simple, but practical. I decided to make the transmitter DSB (double sideband) to eliminate a crystal filter. The output power goal was 1 Watt PEP. I also decided to make the receiver a direct conversion design. See Figure 1 for the completed unit. Note the Motorola microphone - I was with Motorola's Land Mobile Division as an RF design engineer from April 1974 through July 1988


Figure 1. K9LA QRP Transciever
When completed, I used it during the months of May, June and July of 1989. 1989 was around the peak of Solar Cycle 22, with propagation on 10-Meters offering many great opportunities. I worked a number of states and a handful
of countries with my little rig, undoubtedly helped by my Cushcraft 4-element 10-Meter monobander at 72 feet.

See Table I for basic performance parameters.

## THE VFO

I started the entire electrical design process with the VFO. Being a direct conversion receiver, the VFO runs at 28 MHz . My first design didn't work very well - it drifted excessively and pulled about 1 kHz when going to transmit. A redesign resolved these issues. The VFO is in a shielded housing. The VFO is not temperature compensated as I intended to only use the rig at home in a controlled temperature environment.


Figure 3. Inside the K9LA QRP Transciever

## THE TRANSMITTER

The design of this module was the easiest. I used a push-pull RF Power MOSFET (an ACRIAN UMIL20FT) as the final device, but I also bread-boarded two parallel BJTs (bipolar junction transistors - Motorola MRF237s) and they worked equally well.

## THE RECEIVER

Initially I was worried that the receiver sensitivity wasn't good enough, but soon realized it was commensurate with the output power level of the transmitter. If I could hear a station, I had a good chance of working that station.

The biggest problem I had with the receiver was AM detection of Citizen Band signals at 27 MHz regardless of the frequency tuned to. Adding a 28 MHz band pass filter at the receiver front-end resolved this problem.

## CONSTRUCTION

The design was broken down into three separate boards - a VFO board, a receiver board and a transmitter board.

In lieu of etching boards, I used a combination of dead-bug construction and small solder-down (to the copper foil on the board) insulated terminals. This technique is adequate for designs at 28 MHz (and even at higher frequencies).

## FINAL COMMENTS

With Solar Cycle 25 on the rise, I rescued this rig from a dust-filled corner and hope to have fun with it in 2023 and beyond. I've even thought of adding another output stage in the transmitter to increase the ratio of QSOs to calls. Carl Luetzelschwab K9LA \#41258


Figure 2. Block Diagram showing gains and losses of each block.

| Table 1. Performance Parameters |  |
| :---: | :---: |
| General |  |
| Frequency coverage | 70 kHz |
| Weight | about 1.5 lbs . |
| Size | 3 " high x 5 " wide $\times 6$ " deep |
| Frequency stability | $<100 \mathrm{~Hz}$ after 5 minutes |
| Receiver |  |
| Min. discernible signal | -114 dBm (2.7 kHz BW) |
| Current drain in receive | 0.35 Amps |
| Rejection at 27 MHz | 17 dB |
| AF selectivity | $\begin{aligned} & -6 \mathrm{~dB} @ 2.7 \mathrm{kHz} \\ & -40 \mathrm{~dB} @ 8 \mathrm{kHz} \\ & \hline \end{aligned}$ |
| Transmitter |  |
| Output power | 1 Watt PEP |
| IMD at 1 Watt PEP | -24 dB ref either tone |
| Carrier suppression | -40 dB |
| Harmonic suppression | -35 dB (meets FCC limits) |
| Current drain at 1 Watt PEP | 0.52 Amps |

## ARTICLES

There is always a need for articles in the News. There have been a couple requests for Do-lt-Yourself articles. If you have something you would like to see in print please feel free to submit it. The most popular articles seem to be those relating to antennas, DIY projects, and kit building. Send your submissions to editor@ten-ten.org.

## Antenna Safety Notes

Here are a few safety tips that C. B. Cebik W4RNL, \#41159 shared in a previous issue of this newsletter.
Static Build-Up: As the wind and weather pass over the antenna elements, a charge builds up. On long wire antennas, it can generate enough of a charge to draw a visible spark across a gap to ground. On smaller antennas it can create unnecessary static. The best way to avoid problems here is to be sure that the antenna is at DC ground. Some antennas are designed with a DC ground; others are not. For low impedance antennas (less than 150 ohms feed point impedance) fed with coax, the simplest way to insure a DC ground is to place an RF choke across the antenna terminals. This gives you a DC ground [path but leaves the antenna RF-hot. At 10-meters, a 100 micro-H RF choke provides
about 1800 ohms of reactive isolation, but a low resistance to charge build-up. Just be sure your coax braid is grounded somewhere along the line so that the charge has somewhere to go other than to your equipment.
Parallel feedline systems, such as all-band doublets require a different treatment, since the impedances they may see can range up to 5000 ohms and more. Here we can use high value resistors where the feedline enters the house. Run $1 \mathrm{M} \Omega$ resistor from each line to ground rod where the line meets the shack. It is also useful to add a knife switch or other disconnecter (with alternative contacts directly grounded) to remove the connection to the equipment when the antenna is not in use.
Tower and Coax: Some studies have shown that the bulk of lightning current travels in the shield of the coax. A considerable voltage difference can exist between a tower leg and the coax braid if the first connection between the two is at the bottom of the tower. You may want to consider breaking your coax near the top of the tower, having one section to the antenna with the flex loop to accommodate rotation and another section down the leg of the tower. Securely fasten a plate to the tower leg and use a double female connector with chassis nuts (often called a bulkhead connector) to join the two coax lengths. This gives you a connection between the coax braid and the tower leg. This is not the only ground you should use, but an extra one.
Total Disconnection: During violent electrical storms, surges can enter the station equipment from several sources: the antenna lines, the AC power lines, and ground. When dealing with surges, do not think in terms of complete electrical paths. A surge can charge components, cases, and chassis, and create high voltages across components that are designed for low voltages. Hence, during violent storms, do a complete disconnect.
Outdoors, disconnect all antenna feed lines and reconnect them to a ground rod in the station ground system. Indoors, disconnect antenna feedlines from the station equipment. Unplug all equipment - or that power strip you use as a master switch. Most power switches are single pole, so one must unplug in order to break the neutral and ground line paths along which surges can travel. Also disconnect the station equipment from the master ground lead to the outdoor ground rod system. If you do some careful planning, you can make all these moves in under a minute. Just be sure that all the connections are accessible and require no tools to connection and disconnection.
While it may be true that a direct strike is rare, most damage occurs from nearby strikes that place heavy voltage surges on power lines, antennas, and the ground. You can do a lot to keep them outdoors, where they belong.

## 10-10 SCHOLARSHIP

## FOUNDATION SUPPORTERS

We encourage all of our members to support the 10-10 International Net Scholarship Foundation. Our goal has always been to fund our scholarships entirely through member donations. At the Scholarship Foundation meeting in June, the Foundation Board voted to guarantee the funding for three $\$ 2000$ scholarships to be awarded in 2023. The Foundation was created in 2001 and is a qualified 501 (c)(3) tax exempt organization and contributions are tax deductible. Why not consider a donation as a Chapter or an individual in memory of a fellow ham or loved one. This quarter a donation was received from Larry Banks, W1DYJ, \#66485 in memory of his father Sam Banks, WA1INL.The following people donated in the memory of my father Abraham Berger, W2BLH, \#33333: Matthew Berger, K2MSB, \#60606; Robert Berger, WA2EJO, \#27615; Andy Kirschenbaum, WA2CDL, \#3087; Larry Berger, WA2SUH, \#407 and Michael Berger (new call W2BLH). If you have an employer matching program, please let us know. If you haven't donated before, we want you to know that all donations are appreciated and they do add up. At the time you make a donation to your favorite charity, please consider a donation to the 10-10 Scholarship Foundation
If you make a donation of $\$ 25$ or more you are eligible to receive one of the historic 10-10 pins. As more and more members have told me not to send a pin and want the maximum amount of their donation to go to the students, if you have made a qualifying donation and would like a pin, please contact me at wa2suh@aol.com. To pay by credit card see payment information on our website (www.ten-ten.org). or send your check to me or the Data Manager. Our addresses can be found on Page 29.
The members listed below became 10-10 Scholarship Foundation Supporters during the months of September, October and November and we appreciate their support.

| Platinum (\$1000 or more) |  |  |
| :---: | :---: | :---: |
| N5MT. | .................... Michael Davidson .............. | . 24949 |
| Gold (\$500 to \$999) |  |  |
| None |  |  |
| Silver (\$100 to \$499) |  |  |
| KD5HIP | . John Zumbro.. | . 71476 |

## Bronze (Up to \$99)

| WA2S | Larry Berger............................... 00407 |
| :---: | :---: |
| WA2CDL. | Andy Kirschenbaum.................... 03087 |
| WA2EJO. | Robert Berger ............................ 27615 |
| WA7ONE | Ronald McCombs ....................... 29018 |
| K2MSB | Matthew Berger .......................... 60606 |
| W1DYJ | Larry Banks............................... 66485 |
| KE6ZPF | Kirby Bay .................................. 70187 |
| KF6JBQ | Nancy Bay ................................ 70186 |
| W2BLH | Michael Berger |
| -10 SCH | ANT INFORMATION |

## 10-10 SCHOLARSHIP APPLICANT INFORMATION

Each year the 10-10 International Net, through our non-profit corporation, the 10-10 Scholarship Foundation, funds three $\$ 2000$ scholarships, which are administered on our behalf by the Foundation for Amateur Radio (FAR). It is suggested that every 10-10 member encourage qualified college-bound amateur radio operators to take advantage of this opportunity. Over the past 35 years, 10-10 has funded 133 scholarships valued at \$177,000.
Applicants must be licensed amateurs. There is no restriction on the course of study, but applicants must intend to seek at least an Associate Degree from a college or university. Non-U.S. amateurs and those seeking graduate degrees are also eligible, as well as students who study outside the United States. Initial applications must be received by FAR prior to April 15th of each year. Download an application from the
FAR website:http://www.farweb.org or request an application from:

FAR Scholarships<br>P.O. Box 911<br>Columbia, MD 21044-0911

## TEN-TEN AWARDS

To apply for any 10-10 Award, paid-up membership is mandatory. You are not required to send in proof as the Awards Manager has the current membership database. All contacts made for any award must be legal 10-10 contacts (a full exchange of Call, Name, QTH and 10-10 number from BOTH members). An application listing the rules for each award is available from the appropriate Awards Manager listed at the end of the award listings. Please send your request with a \#10 (business size) envelope, self addressed and stamped with one unit of first class postage (or enclose one IRC for GB Award), to the Award Manager for the Award you are interested in obtaining. Please no phone calls to Award Managers for an application or list of rules. Contact requirements and rules for all Awards are available on the 10-10 website at www.ten-ten.org


## AWARDS MANAGERS

|  |  | $45$ | (828) 728-5049 |
| :---: | :---: | :---: | :---: |
| Bar 1000+ | Rob Cromer, KE0MIZ \#77 | 12932 Palamino Place, Wellington, CO 8054 | (970) 692-4421 |
| VP Bar | Thomas Cole, KI5ELV \#77743 | 3238 Wagner St., Shreveport, LA 71108 | (318) 617-0562 |
| VP WAS | Charles (Chuck) Dockery, N7UQ | 112 S. Rolling Meadows Dr. Wylie, TX 75098 | (469) 829-5462 |
| VP Lucky 13 | Dan Morris KZ3T \#41015 | 3162 Covington Way, Lenoir NC 28645 | (828) 728-5049 |
| WAC | Kevin Gilot, NZ1I, \#72759 | 50 Cindy Lane Mystic, CT 06355 | (860) 572-6086 |
| Counties | Mark Tatlor Murphy, KC4HIT \#57488 | PO Box 936, Conover, NC 28613-0936 | (336) 561-3630 |
| Countries | Mike Davidson, N5MT \#24949 | 26274 Whispering Pines Ave, Denham Springs, LA 70726 | (713) 417-4727 |
| CW. | Lee Zalaznik, KI6OY \#50948 | 334 Olivina Ave., Livermore, CA 94551-6137 | (925) 455-0361 |
| Digital. | Mel Sojka, KD5DE \#33513 | 353 Atlantic Ave., Shreveport, LA 71105-2909 | (318) 286-2963 |
| Mobile | Paige Butler, W0FLZ \#48658 | 21922 36th Ave NW, Stanwood, WA 98292 | (425) 308-5561 |
| OM/XY | Marcus Lieberman, KM5EH \#71103 | . 2300 Hurley Drive NW, Albuqerque, NM 87120-1013. | (505) 836-1724 |
| WAS | Eva Donaldson, WB0CON \#53964 | 12933 W Montana Drive, Lakewood, CO 80228-4244 | (303) 989-0475 |
| WPX | Ed Bryant, KM5FF, \#50356 | 9001 Sunbow Ave SW, Albuquerque, NM 87121-8851 | (505) 934-2100 |
| GB Counties | Mike Crawshaw, G4BLH \#18446 | 35 Edward Drive, Clitheroe, Lancashire, England BB7 1 | No Phone |

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wb0con@comcast.net elbble@gmail.com g4blh@zen.co.uk

## An Update on Cycle 25

In my other article in this issue (my homebrew 10-meter QRP transceiver), I mentioned that Cycle 25 is on the rise. Let's take a deeper look at Cycle 25's progress.
Historical data is always a good place to start. Figure 1 shows the maximum smoothed sunspot number for all previous twenty four solar cycles. The major take-away from this plot is the fact that the data is cyclic in nature.


Figure 1. Historical Solar Cycle Data

We've gone through what appears to be three periods of big solar cycles Cycles 1-4, Cycles 8-11 and Cycles 17-23. Note that our lifetimes were in the last period of big cycles. We had great opportunities on the higher HF bands: on 15-meters, on 12-meters and especially on 10-meters (and even 6-meters!).
We've also gone through two periods of small solar cycles - Cycles 5-7 and Cycles 12-16. If this cyclic trend continues, it looks like Cycle 24 has entered us into a third period of small solar cycles. By the way, Cycle 24 was the smallest


Figure 2. Cycle 25 Progress
in our lifetimes and the fourth smallest in recorded history.
Now let's look at how Cycle 25 is doing, and compare it to Cycle 24 (a small cycle), Cycle 23 (an average cycle) and Cycle 21 (a moderately big cycle). Figure 2 shows this data. We now have 30 months (two and a half years) of smoothed sunspot number data for Cycle 25.

So far, Cycle 25 (the thick red curve) appears to be best tracking the small Cycle 24. But that doesn't necessarily mean that it will end up as a small cycle. There's still time to have an increase in activity and get it up to an average cycle. All we can do is wait to see what happens.
Two final comments. First, there are more than 50 predictions for Cycle 25, ranging from a low cycle to a cycle rivaling Cycle 19 (the biggest in recorded history - see Figure 1). What this tells us is that we don't fully understand the solar cycle process. Second, sunspots themselves (and 10.7 cm solar flux) do not have anything to do with the ionization process of the F2 region (the region of the ionosphere that is most responsible for our long-distance contacts). The true ionizing radiation of the F2 region is EUV (extreme ultra-violet) radiation at very short wavelengths (roughly 10-100 nm). Sunspots and 10.7 cm solar flux are but proxies for EUV.
Carl Luetzelschwab K9LA \#41258

## Beta Coils and Hairpins

Editor's note: This article is a reprint of an article done by L.B. Cebik, W4RNL (SK), \#41159 in a previous issue of this newsletter.

In a number of columns, I have mentioned the beta match. Let's take a brief look at what it is and what it does.
The beta math appears to be simply a small coil or hairpin placed across the terminals of an antenna, most often a Yagi. Some folks mistake the coil for an RF choke, while others mistake the hairpin for a short circuit.
Actually, the beta coil or hairpin is one part of an impedance matching circuit, where the remaining elements are invisible, if you do not know what to look for. Many Yagi antennas have feedpoint impedances in the 20 to 35 Ohm range, somewhat low for feeding directly with coaxial cable. We need to raise the impedance to 50 Ohms - and that is what the beta match system does.
The coil is not the only element in the circuit. There is also a capacitor - or more correctly, some capacitive reactance. We get that part of the circuit from the antenna element itself.
Figure 1 shows how we move from a resonant driven element to a beta match. Let the resonant antenna impedance be low, say about 25 Ohms. If we shorten the element, the resistance does not change significantly, but the antenna


## Beta-Match Network

## Figure 1. Beta-Match Network

becomes capacitively reactive, as the middle part of the figure shows.
If we shorten the element by the right amount, we get the right capacitance reactance in series with the antenna resistance to go together with an inductance across the coil to make an L-circuit. An L-circuit is one of the fundamental impedance transformation circuits, and in this case, -Xa and XL together change the 25-ohm antenna resistance to 50 Ohms.
We can calculate the needed values if we know the antenna feedpoint resistance (Ra). (We know the coax has a characteristic impedance (Ro) of 50 Ohms.) First we calculate a value called "delta" by some and "working Q" by others. Delta = the square root of [(Ro/Ra)-1]. Now we can easily calculate the necessary values of capacitive reactance in the antenna (-Xa) and of inductive reactance to place across the terminals (XL). Xa = Delta times Ra. XL = Ro / Delta.
Since these values are given as reactances, you need to convert the inductive reactance into a component value. The capacitive reactance will be developed by simply shortening the antenna element until the beta match gives us 50 Ohms.

For reference, here is a small table of values we commonly encounter with beta matches with 50-Ohm coax for various values of antenna feedpoint resistance (Ra):

Table 1. Common Beta Match Values with 50 Ohm Coax

| Ra $(\Omega)$ | 33 | 25 | 17 |
| :---: | :---: | :---: | :---: |
| Delta | 0.7 | 1 | 1.4 |
| $\mathrm{Xa}(\Omega)$ | 23.6 | 25 | 23.6 |
| $\mathrm{XL}(\Omega)$ | 70.7 | 50 | 35.4 |

Notice that the capacitive reactance reaches a peak when delta $=1$, while the inductive reactance gets smaller as the feedpoint resistance gets smaller.

We have not yet converted these inductive reactances (XL) into a component value, because there are two distinct ways to achieve the required reactance across the coil. Figure 2 shows them both.


## Figure 2. Hairpin and Inductor Beta Matches

The beta inductor is simply a coil with the value of inductance that provides the inductive reactance at the operating frequency. If you divide the required inductive reactance by the product of the operating frequency (in Hz ) and twice pi, you get the right inductance.

The hairpin version of the beta inductor is actually a small shorted stub of parallel transmission line. Rather than go through the calculation procedure, I shall simply once more recommend that you obtain a recent copy of HAMCALC, a suite of handy ham calculation programs in GW Basic. You can get a copy for $\$ 7$ to cover CDROM and mailing costs from George Murphy, VE3ERP, 77 McKenzie Street, Orillia, ON L3V 6A6, Canada. Among the selections on the disk is an excellent program that will calculate the dimensions of a hairpin for the match. It was written by Thomas Cefalo, Jr., WA1SPI. The program will also tell you the equivalent inductance in case you want to wind a coil. Other programs in HAMCALC will help you wind an accurate coil.
Many antenna builders use the experimental technique of adjusting the driven element for a beta match. After calculating the beta coil or hair pin, they install it and then adjust the element length for a low SWR. Antenna modelers tend to determine the required element length in advance from their software and save some time fumbling for the right element length.
Either way, the beta match results in a very low loss match. For inductor Qs over 100 (easily to obtain, but some maintenance is required to maintain the $Q)$, losses will be well under $1 \%-$ and even less for the hairpin.
If you like to build antennas, you should become familiar with the beta match. Some folks actually avoid the beta match because it is "too simple to really work." However, it does work, and very well indeed for antennas with moderately low feedpoint impedances. Since there are easy-to-use utility programs for calculating everything you need, there is no need to avoid either the beta match or antennas that require one.


## Meet The Volunteers

A year-long event to find and make contact with all of the people who devote time to keep 10-10 an active organization!
The goal? Make contact with each of the following volunteers during 2023

| AJ7B, Randy................................................Editor | N1API, AI .....................................................Committee Member |
| :---: | :---: |
| G4BLH, Mike ...............................................Awards - GB | N3GTY, Bill ..................................................Committee Member |
| K1IEB, Tim...................................................Net Control | N5MT, Mike..................................................Awards - DX |
| K5BKT, Peg ................................................Committee Member | N6OPR, Bob...............................................Director |
| K5PLH, Phyllis.............................................Historian | N7UQ, Chuck, .............................................Awards - VP WAS |
| K6RDK, Dave ..............................................Data/ Membership Manager | N7YG, Jeff.................................................IT Manager |
| K7CWS, Ray ..............................................Net Control | N9AC, Gerald .............................................W6OI Trustee |
| KC4HIT, Mark ..............................................Awards - Counties | NFOJ, David................................................President |
| KD2NOM, Mark ............................................Director | NP2MR, David.............................................Committee Member |
| KD5DE, Mel................................................Past President | NS6X, John ................................................Committee Member |
| KEOMIZ, Rob...............................................Awards - 1000+ | NZ1I, Kevin.................................................Awards - WAC |
| KF4WKY, Mike..............................................Net Control | VA7GY, Garry ..............................................Committee Member |
| KG5RJ, Greg..............................................Committee Member | WOFLZ, Paige.............................................Award - Mobile |
| KI5ELV, Thomas ..........................................Awards - VP Bars | W5DJT , David ............................................Committee Member |
| KI6OY, Lee ................................................Awards-CW | W5SUM, Ronnie..........................................Vice President / Secretary |
| KJ5SZ, Hugo ..............................................General Counsel | W7WHB, Steve...........................................Net Control |
| KM4ODS, George .........................................Director | W9HT, Joshua .............................................Committee Member |
| KM5EH, Marcus ...........................................Director | WA2SUH, Larry ............................................Director |
| KM5FF, Ed..................................................Awards-WPX | WA4KUP, Brad .............................................Committee Member |
| KR7RK, Keith, ..............................................Treasurer | WBOCON, Eva.............................................Awards - WAS |
| KZ3T, Dan...................................................QSO Party Manager | WB60JB, Arnold...........................................Net Control |

RULES FOR THIS EVENT AVAILABLE AT WWW.TEN-TEN.ORG IN THE QSO PARTY HANDBOOK

> THE AMATEURS CODE
> by Paul M. Segal, W9EEA (1928)

The Radio Amateur is:
CONSIDERATE..... never knowingly operating in such a way as to lessen the pleasure of others.
LOYAL..... offering loyalty, encouragement and support to other amateurs, local clubs and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE..... with knowledge abreast of science, a well built and efficient station, and operation beyond reproach.
FRIENDLY..... with slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.
BALANCED..... Radio is an avocation, never interfering with duties owed to family, job, school or community.
PATRIOTIC..... with station and skill always ready for service to country and community.


## 10-10\# Call Name - City, State

71145 AC5JQ Ronald W. Fury - Stillwater, OK
71342 KE4KLD William B. Sowers, III - New Kent, VA
71783 K5SAL Salvatore Perrone - Baker, LA
72262 W1WAM William A. Marchand - New Hartford, CT
72840 WA2ZNC Leonard M. Gessin - Honeoye, NY
76378 NOWNB Larry C. Damouth - Carlyle, IL
76658 N7SWT Steven W. Troyer-Sublimity, OR
77694 W5RGS Ronald G. Stroope - Stonewall, LA
77776 N5LDF Larry Foster - Benton, AR
Thanks to Lee - K2HAT - \#76138 for his efforts in helping me keep the sk column as up to date as possible.
Mark 73, KD2NOM \#77596

2023 Ten-Ten QSO Party Schedule

| Event | Dates | Postmark |
| :--- | :---: | :---: |
| Winter Phone | Feb. 4-5 | Feb. 13 |
| Spring Digital | April 29-30 | May 8 |
| Spring CW | May 6-7 | May 15 |
| Open Season | June 3-4 | June 12 |
| Weak Signal | July 8-9 | July 17 |
| Summer Phone | Aug. 5-6 | Aug. 14 |
| Sprint | Oct. 10 | Oct 18 |
| Fall CW | Oct. 21-22 | Oct. 30 |
| Fall Digital | Nov. 11-12 | Nov. 20 |
| Anniversary (61) | Jan 1 - Dec 31 | Jan 8, 2024 |
| Meet the Volunteers | Jan 1 - Dec 31 | Jan 8, 2024 |

## WOULD YOU LIKE TO JOIN 10-10?

## Here is what you need:

1. You must hold a valid amateur operator license
2. Your valid amateur operator license MUST authorize or qualify you for unsupervised transmitting operations in the ten meter amateur band under your own personal call sign.
3. You must make contact with ten members of 10-10 and submit a log listing all contacts, their 10-10 number, call sign, name (as received on the air), date of contact, and QTH (state/province/country). The contact form and membership application is provided on the page that follows.
4. You must remit dues for one or more year's full membership. Fee schedule and payment information can be found in Section 2 of the page that follows.

## TYPES OF MEMBERSHIPS

To become a member either fill out the form on the following page and mail to the Data Manager at the indicated address or go on-line to the 10-10 web page, www.ten-ten.org and follow the links from 'membership' to 'application' and select membership category.

Primary Membership
Primary membership is available with yearly dues, although there is a special incentive available when you pay for three years at once.

Family Membership
Family membership consists of a primary member and one or more family members who qualify as a 10-10 member (has made the necessary 10 contacts) and who reside at the same location and postal address. Family memberships run concurrently with that of the primary member. Add $\$ 5.00$ for each additional family member for each year. Only the primary member will receive a copy of the 10-10 News.

## Life Membership

Life membership is available and may be paid in one lump sum or spread across two or three yeas. For information refer to the "Life Membership Application" form on the web or contact the 10-10 Data Manager.

Senior Life Membership
Senior life membership is available to anyone who is currently 65 years of age or older. Payment can be made as one lump sum or within a one year period. For information refer to the "Life Membership Application" form on the web or contact the 10-10 Data Manager.

Family Life Membership is no longer available
Club Membership
Club membership is available to any Amateur Radio Organization which holds a valid Amateur Radio License. Application must be made by the club trustee. Dues are the same as the Primary member. No family or life memberships are available. Clubs have all the same rights and privileges as primary members except the right to vote in elections.

## Electronic Membership

Electronic Membership is available to anyone who qualifies for any of the types of membership listed previously. Electronic membership means that all communications, including the 10-10 NEWS, from 10-10 to the qualifying member will be conducted via email distribution. The exception to this policy is when a member qualifies for a certificate from either one of the various QSO Parties or from one of the Awards programs.

## MEMBERSHIP RENEWALS

Either fill out on the following page the top half of Section 1, including your 10-10 number and Section 2 and mail to the Data Manager at the indicated address or go on-line to the 10-10 web page www.ten-ten.org and follow the links from 'membership' to 'renewals' and select the membership category.

## DATA MANAGER SERVICES

Call/Name/Address Changes
All changes are to be sent to the 10-10 Data Manager. Please include your address label (or a copy) with necessary corrections. This also can be accomplished at www.tenten.org using the membership/update link.

All payments may be made by Check, or Money Order. Due to banking regulations Credit Cards cannot be accepted for merchandise. Membership Services and Scholarship Donations can be made via credit card using the secure shopping cart at www. ten-ten.org

Mail to:
Data Manager, 10-10 International Net, Inc.
1349 Vernon Terrace
San Mateo, CA 94402-3331

## SCHOLARSHIP DONATIONS

Donations to the 10-10 Scholarship Foundation are encouraged by our members to help fund three $\$ 2,000$ 10-10 Scholarships that will be awarded next year. For donations of $\$ 25$ or more you are eligible to receive a current year's lapel pin as a thank you gift. To pay by credit card, see the payment information on our website (www.ten-ten.org). Your check should be made payable to the 10-10 Scholarship Foundation and sent to the Data Manager (address shown above) or the Scholarship Manager:

Larry Berger, WA2SUH
10-10 Scholarship Manager
9 Nancy Blvd.
Merrick, NY 11566-3119

## TEN-TEN QSO PARTY RULES

### 5.2 10-10 QSO PARTIES

10-10 QSO Parties are events that are held for fun and to meet old, new and prospective members around the world. The rules listed here are for all general QSO parties. The Spirit of 76 and Open Season QSO Parties are specialty events and do have additional rules. The Anniversary and Meet the Volunteers are year long contact events.

### 5.2.1 WHO IS ELIGIBLE?

QSO Parties are open to all amateurs with operating privileges on the 10 meter band, however, logs will be accepted only from active members as of the date of the event with the following exception: Open Season event logs will be accepted from all amateurs. Other logs received will be handled as check logs. Check logs are used to validate (check) other logs, but do not qualify the sender for any awards. A QSO Party contact log submitted by an Amateur that intentionally submits erroneous contact information to cause errors on membership applications and awards will be considered an invalid log. Ten-Ten will not accept any log of contacts from an Amateur who had his or her membership/1010 number revoked.
5.2.2 WHEN ARE THE QSO PARTIES?

There are currently nine QSO Parties held throughout the calendar year:
Winter Phone - held on the first full weekend in February
0001 UTC Saturday through 2359 UTC Sunday.
Spring Digital - held on the last full weekend in April.
0001 UTC Saturday through 2359 UTC Sunday.
Spring CW - held on the first full weekend in May.
0001 UTC Saturday through 2359 UTC Sunday.
Open Season (PSK) - held on the first full weekend in June
0001 UTC Saturday through 2359 UTC Sunday.
Weak Signal - held on the second full weekend in July - 0001 UTC Saturday through 2359 UTC Sunday.
Summer Phone - held on the first full weekend in August.
0001 UTC Saturday through 2359 UTC Sunday.
Sprint - a 24 hour event held on October 10th (10-10).
0001 UTC through 2359 UTC.
Fall CW - held on the third full weekend in October.
0001 UTC Saturday through 2359 UTC Sunday.
Fall Digital - held on the second full weekend in November.
0001 UTC Saturday through 2359 UTC Sunday.

### 5.2.3 FREQUENCY AND MODES

Direct unassisted contacts only are permitted. Repeater, Satellite, IRLP, Echolink, or any other similar type of assisted contacts are NOT allowed. Based on the appropriate band plan for the country of operator, CW QSO Parties should be operated in the CW area of the 10 -meter band and operated using CW only. Digital QSO Parties should be operated in the digital area of the 10 -meter band and operated using Digital modes only (RTTY, PSK, etc). Phone QSO Parties must be operated in the PHONE area of the 10-meter band and may be operated using any approved method (SSB, FM, AM). The SPRINT utilizes all operating modes in the 10-meter band.

### 5.2.4 ENTRY CLASSIFICATION

Entrants may submit a log in ANY of the following classifications:

QRP: Includes single station operators and can also include $\mathrm{OM} / X Y \mathrm{~L}$ teams or any families or groups of people using individual call signs and 10-10 numbers. CW/Digital/ RTTY operations max 5 watts and Phone operations max 10 watts during the entire event.
LOW POWER: Same as QRP listed above except that output power for CW/Phone/ Digital/RTTY operations is max 150 watts during the entire event.
HIGH POWER: Same as QRP listed above except that output power for CW/Phone/ Digital/RTTY operations is greater than 150 watts during the event.
CLUB: A Club must have a valid club station license issued by their National Licensing Authority and must have an active 10-10 membership. Club entries must list the call, name and 10-10 number (if any) for all operators using the club call. Club operations will take place at one location using one set of equipment. Operators entering under a club entry may also enter an individual log for contacts made using their own call sign.
MOBILE: A mobile applies to car, truck, RV, motorcycle, boat, airplane or other mode of transportation. Use of a base station antenna, amplifier or commercial power is not permitted. Operation while your vehicle is parked across a county line, occupying two counties, counts as two counties and two contacts. Marine and aeronautical mobiles must be able to establish counties of operation. Safety is paramount while operating mobile. If you are unable to park near multiple county lines due to safety issues (i.e. on a bridge, on a freeway, etc.), please move to the closest area which would provide the best operating conditions and still be able to give out multiple counties. Duplicate entries are allowed when working in multiple counties. In addition to the normal log information provided the County Worked from and County worked must also be included. Mobile stations will receive awards within their own category and will not be included in the individual sections or Top Ten in the World. Mobile entries will only be accepted for Winter \& Summer Phone and 10-10 Sprint QSO Parties.

### 5.2.5 TRANSMITTER INFORMATION

An operator may operate mobile, portable or fixed. If they change their exchange QTH during the QSO Party, the operator must show same in their log. The operator may enter a log from one call district, province, or DX country. Multi-transmitters (two or more transmitters operating simultaneously, sharing one call sign) are NOT permitted in any QSO Party. No matter your physical location, your QTH is the location of the transmitting antenna.
5.2.6 EXCHANGE

10-10 members send call sign, name, 10-10\# and QTH (State, Province or Country). If received exchange does not have a 10-10\#, then record a zero (0) in the log.

### 5.2.7 QSO POINTS

Two (2) points are awarded for contacts WITH a 10-10 number. One (1) point is awarded for contacts WITHOUT a 10-10 number. Duplicate entries should be retained in log and show a zero (0) for points. Any log showing $10 \%$ or more errors may be handled as a check log. A station may be counted only once regardless of mode except during certain specialty events.

### 5.2.8 CHAPTER SCORE ASSIGNMENT

Any entrant who is a chapter member may assign his/her score to that chapter. QSO Party chapter scores for the Sprint and Open Season may not be assigned.

## TEN-TEN QSO PARTY RULES

### 5.2.9 QSO PARTY ENTRIES

Logs shall be forwarded to the QSO Party Manager as identified in the 10-10 NEWS or on the 10-10 web site. It is strongly suggested that logs be sent as soon as possible after the close of the event. It is also recommended that DX logs should be sent AIR Mail to insure they are received in good time. Any logs received with a postmark date AFTER the deadline date will be handled as a check log. Any logs received more than 8 days after the entry deadline, regardless of postmark, will be discarded. LOGS MAY BE SENT VIA Email to tentencontest@ten-ten.org. Q95 files are not a proper format nor are they readable, therefore, they will not be accepted.

### 5.2.9.1 ENTRY DESCRIPTION

Entries must contain a Cover Sheet, Log and Dupe Sheet as described here: COVER SHEET will list the Event Entered, Entry Classification, US Call Area (W0-W9 or DX Country), Chapter Score Assignment (if any), number of contacts and points with 10-10\#, number of contacts and points without 10-10\#, and total contacts and points claimed. LOGS must be listed in date/time order and list UTC Date, UTC Time, Call, Name, 10-10\# (zero (0) if none), QTH and Contact Point Value. A DUPE SHEET is required for any logs exceeding 50 contacts. It may be either a list of all calls contacted in call sign order or hand entered on a dupe sheet grid.

### 5.2.9.2 ENTRY DEADLINES

Entries for all QSO Parties listed EXCEPT the Sprint shall be postmarked no later than 8 calendar days (this will always be a Monday) after the close of the event. Entries for the Sprint (held on 10/10) shall be postmarked no later than October 18th, unless that day falls on a Sunday or holiday, than the postmark deadline shall be October 19th.

### 5.2.10 QSO PARTY RESULTS AND AWARDS

QSO Party results will be posted on the 10-10 web site about 15 days after the closing deadline for the event and also printed in the 10-10 NEWS in the appropriate issue. Awards will be issued by the certificate manager for Top Ten Individual scorers in the World, the top individual scorer in each US Call Area (W0-W9), each DX Country, and for top QRP, LOW POWER, HIGH POWER, CLUB, MOBILE and CHAPTER. Electronic certificates will be sent to the 2nd and 3rd place scorers in these categories.
5.2.11 ANNIVERSARY and MEET THE VOLUNTEERS EVENTS

These events run from January 10001 UTC to December 312359 UTC. In the Anniversary event, entrants may submit a log of contacts with members that have the anniversary year contained in their membership number. Example: 2022 is the 60th anniversary year of 10-10 International Net, Inc. Contact with members containing a " 61 " in their membership number (i.e., $72061,69615,66154,61126,00607$ ) would count toward the event. Each year the anniversary number changes, making a new group of members the focus of the event and promoting the use of the 10-meter band. All general rules are applicable with the following exceptions: During the calendar year (January 1 through December 31) make legal $10-10$ contacts with 10-10 Number, Date, Call Sign, QTH with members containing the anniversary year in their membership number as described above.
In the MEET THE VOLUNTEERS event, entrants may submit a log of contacts with members listed in the 10-10 NEWS as being a 10-10 volunteer. One contact per volunteer is permitted, regardless of mode of contact. In both events, contacts must be made on the $10-$ meter band with any legal mode (AM, SSB, FM, PSK, CW, etc.). All submitted logs
must contain only one entry for each 10-10 number contacted. Contacts MUST be listed in 10-10 number order and each entry must list the 10-10 Number, Date, Call, Name, QTH and Mode, in that order. These events are for Individual entries as described in section 5.2.4 and certificates will be awarded for the TOP Ten, however all entrants will be listed in the 10-10 NEWS.
Logs MUST be postmarked no later than January 8th of the year following both the Anniversary and Meet the Volunteers events. Only members in good standing (with dues paid) are allowed to submit logs.
5.2.12 WEAK SIGNAL QSO PARTY (WSQP)

This event was added to help promote digital activity on the ten-meter band. The event in no way affects or modifies the policies for other scheduled Ten-Ten events. All weak signal modes for this event include: FT/JT/JS8/JS8CALL and any future weak signal mode. No repeater, cross-mode or cross-band contacts allowed.

$$
\begin{array}{ll}
\text { FT4 (28.180) } & \text { FT8 (28.074) } \\
\text { JT65 (28.076) } & \text { JS8/JS8CALL (28.078) }
\end{array}
$$

Entry categories: QRP - Maximum 10 watts output.
Low Power - Maximum 150 watts output.
Exchange: 10-10 members should send call sign, name, 10-10\# and QTH (ST/Prov/ Country). Received exchange should include normal exchange for FT/JT/JS8/JS8CALL modes and for extra points name, QTH and 10-10\#. Scoring will be 1 point for contacts without a 10-10 number and three (3) points for contacts with a valid 10-10\# exchange. NO MULTIPLIERS! All other normal rules apply. Logs shall be forwarded to the QSO Party Manager..
5.2.13 10-10 SPRINT (October 10) QSO PARTY

An award will be issued for working all 10 USA Call Districts.

### 5.2.14 W6OI SPECIAL EVENT

## This event has been postponed until further notice.

This special event operation is where volunteers operate the 10-10 official club stations (W6OI/VE9TEN/DLOX) seeking to work anyone anywhere. Any mode of operation is permitted. Many operators will be authorized to operate W6OI from most US states and VE9TEN from various Provinces/Territories simultaneously. DLOX is operated by Henry, DL8YBM. The purpose is to have fun promoting 10-meter activity making contacts with 1010 members and of course, non-members. This is a great way to increase membership! Exchange is similar to any 10-10 QSO Party event - name, call, QTH, and 10-10 number if one is available. As contacts are made, provide info on the 10-10 organization and where to find our website - www.ten-ten.org. If anyone wants to volunteer to operate W6OI during this event contact Jerry, N9AC. Members in Canada should contact Rob, VE9KM for permission to operate VE9TEN.

### 5.2.15 FOR MORE INFORMATION

Current information about 10-10 and upcoming 10-10 QSO Parties and events are always available on the 10-10 web site. Cover sheets, logging forms and dupe sheets are also available for downloading or printing at http:/www.ten-ten.org. Any unanswered questions regarding the QSO Party rules may be forwarded to the QSO Party Manager.

## 10-10 QSO PARTY COVER SHEET

QSO Party (select one):

- WINTER PHONE - SUMMER PHONE


## Contest Exchange:

Callsign: $\qquad$ Name: $\qquad$ 10-10\#: $\qquad$ QTH*:

- 10-10 SPRINT
- SPRING CW
$\square$ FALL CW QTH*:
- cou $\qquad$


## Entry Information:

Name: $\qquad$
Mailing address:
City:
$\qquad$ Zip:
State/Province/County:
Your e-mail address (for contest questions only):
Call Area (W0-W9) or ARRL DX Country you operated from:
Chapter Assignment, if any (not valid in Sprint):
Entry Type (check one only):
a LOW POWER
$\square$ HIGH POWER $\square$ QRP

- MOBILE
- CLUB (if Club station, please list all operators below this line)


## Claimed Score:

Contacts WITH 10-10 number: X2 $=$ $\qquad$
Contact WITHOUT 10-10 number: $\qquad$ X1 = $\qquad$
Total Contacts: $\qquad$ Total Pts: $\qquad$

## Submitting Logs:

MAILED ENTRIES: All submissions must contain this cover sheet (or reasonable facsimile), the log in UTC Date/ Time order, and a dupe sheet in callsign order or in grid format (if more that 50 contacts).

Mail to Dan Morris, KZ3T, 3162 Covington Way, Lenoir NC 28654, USA
EMAILED ENTRIES: All submissions can be in most formats and must additionally include all information from this cover sheet either in separate summary or as summary at head of log. Many contest programs do this for you. Dupe sheets are NOT required with an e-mail entry. Q95 formats ARE NOT acceptable.

EMAIL to: tentencontest@ten-ten.org.

