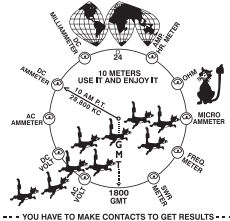


TEN-TEN INTERNATIONAL NET, INC.



TEN-TEN INTERNATIONAL **NEWS**

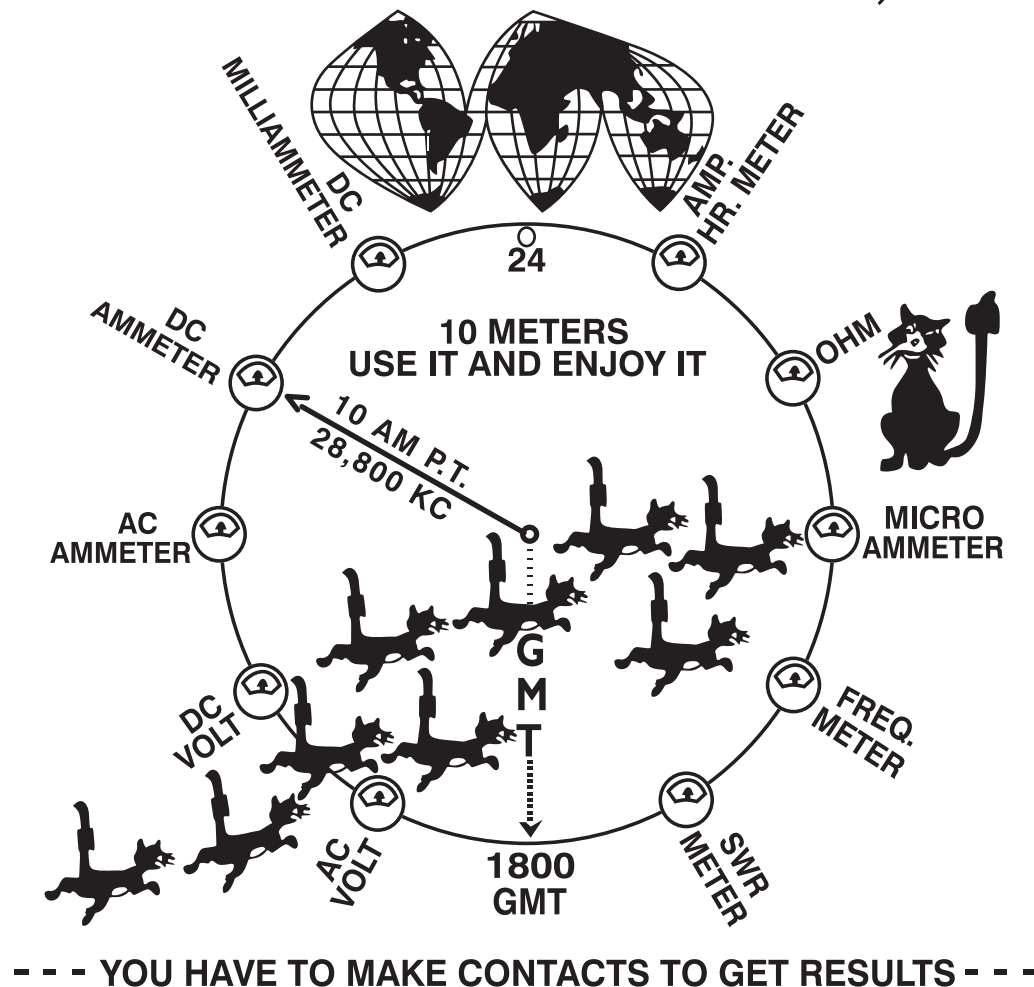


Member
AMATEUR RADIO
NEWS SERVICE

Volume 55 Issue 3

July 2017 (Summer)

TEN-TEN INTERNATIONAL NET, INC.



Official Publication of the Ten-Ten International Net, Inc. - www.ten-ten.org
Monitoring 28.380 and 28.800 MHz daily at 1800Z except Sunday

The Ten-Ten International News

Is published four times annually by the TEN-TEN INTERNATIONAL NET, INC. Publication dates are approximately mid January, April, July and October.

Each paid-up member will receive a copy. This publication is the property of Ten-Ten International Net and the contributors therein. Permission to reprint is hereby granted, providing suitable credit is shown.

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, 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.

DEADLINE FOR NEXT ISSUE: September 1, 2017

PLEASE MAIL ALL ARTICLES AND PHOTOS TO:

EDITOR Ten-Ten News

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

CONTENTS

<u>Net Officials.....</u>	<u>3</u>
<u>From the Editor.....</u>	<u>3</u>
<u>From the President.....</u>	<u>4</u>
<u>Ten-Ten Top OP Award.....</u>	<u>4</u>
<u>New Life Members.....</u>	<u>4</u>
<u>Chapter Coordinator.....</u>	<u>5-6</u>
<u>QSL Bureau News.....</u>	<u>6</u>
<u>W6OI Club Station Report.....</u>	<u>6</u>
<u>DX News.....</u>	<u>7-9</u>
<u>Net Report.....</u>	<u>10-11</u>
<u>Net Control Stations.....</u>	<u>11</u>
<u>QSO Parties.....</u>	<u>12-13</u>
<u>QCWA Charity Cruise.....</u>	<u>14</u>
<u>Pixie Project Notes.....</u>	<u>15-17</u>
<u>Notes on 10-Meter Antenna Tuners.....</u>	<u>17-18</u>
<u>Ten-Ten Net Guide.....</u>	<u>19</u>
<u>10-10 Scholarship Supports.....</u>	<u>20</u>
<u>Meet the Volunteers.....</u>	<u>21</u>
<u>CW Corner.....</u>	<u>21-22</u>
<u>Revisiting a 10 and 6 Meter Mobile Antenna.....</u>	<u>22-24</u>
<u>The V-Yagi.....</u>	<u>24-25</u>
<u>Ten-Ten Awards.....</u>	<u>26</u>
<u>Awards Managers.....</u>	<u>26</u>
<u>When Should I Use a Vertical on 10.....</u>	<u>27-28</u>
<u>Silent Keys.....</u>	<u>29-30</u>
<u>TEN-TEN Box.....</u>	<u>30-31</u>
<u>Membership Information and Services.....</u>	<u>32</u>
<u>QSO Party Rules and Schedule.....</u>	<u>33-34</u>
<u>QSO Party Cover Sheet.....</u>	<u>35</u>

OFFICERS AND DIRECTORS

President

Terry Webb, N0TW, #36547 (2018)

1103 Fulford Road, Monticello, FL 32344-4352

(614) 216-5334 n0twterry@yahoo.com

Past President

Mel Sojka, KD5DE #33513

353 Atlantic Ave., Shreveport, LA 71150-2909

(318) 861-7012 kd5de@ten-ten.org

Vice President

Josh Long, W9HT #72151 (2018)

8725 Edwardsberg Pl, New Haven, IN 46774

(260) 749-9851 drioshlong@gmail.com

Secretary

Kevin Gilot, NZ1I #72759 (2018)

56 Cindy Lane, Mystic CT 06355-1404

(860) 572-6086 kevinemtd@sbcglobal.net

Treasurer

Keith Schlottman, KR7RK #63324

6206 E. Pima St., Suite #2, Tucson, AZ 85712

(520) 290-5883 keith@schlottmancpa.com

Directors

Robert L. Farrow, N6OPR #45715 (2020) - Daily Nets

23417 S 180th Street, Gilbert, AZ 85298

(562) 631-1393 n6opr@msn.com

Gregory Malone, WA3GM, #46927 (2020) - QSO Parties

PO Box 82, Cheltenham, PA 19012

(267) 249-0135 wa3gm@yahoo.com

Paul Hemby, WN4AMO #73825 (2020) - Publicity

40601 Thomas Boat Landing Road, Umatilla, FL 32784-9702

(386) 837-6101 pheby@hotmail.com

Marcus Lieberman, KM5EH #71103 (2018) - Awards

2300 Hurley Dr. NW, Albuquerque, NM 87120-1013

(505) 836-1724 buckml@lobo.net

Roger Olson, AD4RX #67754 (2018) - Publications

1032 Anclote Dr., Tarpon Springs, FL 34689-2015

(727) 934-5243 ad4rx@ten-ten.org

Jim Fox, KA0ZPP #43428 (2018) - Chapters

PO Box 135, Mayhill, NM 8839-0135

(575) 687-2448 ka0zpp10ten@gmail.com

NET OFFICIALS

Certificate Manager

Ruth Bartholomew, N0KDB #48715
 1043 Franklin Court, Sullivan, MO 63080-5502
 (573) 468-2898 or (314) 479-5474 n0kdb@fidnet.com

Chapter Coordinator

Jim Fox, KA0ZPP #43428
 PO Box 135, Mayhill, NM 8839-0135
 (575) 687-2448 ka0zpp10ten@gmail.com

Data Manager / Supplies

David Smith, K6RDK #65812
 1349 Vernon Terrace, San Mateo CA 94402-3331
 (telephone no. not available) membership@ten-ten.org

Editor 10-10 International News

Randy Mather, AJ7B #7675
 9625 101st Ave NE
 Arlington, WA 98223 editor@ten-ten.org

Net Manager

Robert L. Farrow, N6OPR #45715
 23417 S 180th Street, Gilbert, AZ 85298
 (562) 631-1393 N6OPR@msn.com

QSL Bureau Manager

Jim Steber, WI9X, #49635
 8829 Bermuda Ave., Caseyville, IL 62232
 (618) 560-7098 wi9x1989@yahoo.com

QSO Party Manager

Dan Morris, KZ3T #41015
 3162 Covington Way, Lenoir, NC 28645
 (828) 728-5049 dbmorris315@gmail.com

IT Manager

Jeff Steinkamp, N7YG #65084
 6765 E. Rosewood Cir., Tucson, AZ 85710
 (520) 546-2290 n7yg@n7yg.com

Scholarship Manager

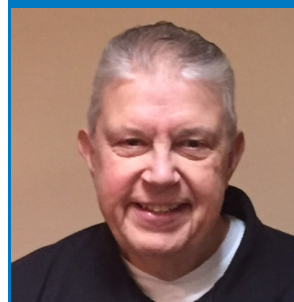
Larry Berger, WA2SUH #00407
 9 Nancy Blvd., Merrick, NY 11566-3119
 (516) 223-4611 wa2suh@aol.com

SK Manager

Ruth Bartholomew, N0KDB #48715
 1043 Franklin Court, Sullivan, MO 63080-5502
 (573) 468-2898 or (314) 479-5474 n0kdb@fidnet.com

W6OI Station Trustee

Jerry Kopstein N9AC #61453
 8041 W Lakeshore Drive Burlington, WI 53105
 (262) 661-9094 treismine2@yahoo.com



From the Editor

Randy Mather, AJ7B
 (#7675)

In this edition there are some articles from some of our 10-10 net members. Thanks Charlie (WA2HMM) for getting permission from the ARRL to reprint your article on a 10 and 6 meter mobile antenna. It's a very interesting way of building a new antenna. Also, Mel KD5DE sent in a nice article on the Pixie3 transceiver. For those who like to build equipment, this project looks like a winner. Thanks Mel.

As the columns on QSO parties, Awards and Chapters get smaller due to waning 10 meter activity, I have had to fill with three articles from Cebik's antenna book. Which are really articles that have been previously published in this newsletter. I know I am like a broken record, but I really need some help filling in this newsletter every quarter.

By the time everyone reads this, Field Day will be history and summer will be well underway. So enjoy your summer and make the best of it. If you've got the time and the propagation, give the Spirit of 76 and Summer phone QSO parties a try. You just never know what you're going to see on the bands these days.

73 - Randy AJ7B

10 Meter Beacons

As 10 meter operators one should be aware propagation beacon frequencies are coordinated.

I would appreciate a message from anyone with thoughts of activating a beacon. wj5o@amsat.org

73 Bill WJ5O

IARU Region 2 HF Beacon Coordinator

<http://www.qsl.net/wj5o/bcn.htm>



From the President

Terry Webb N0TW
#36547

This is the end of May and finds me recovering from the Dayton/Xenia Hamvention. It was a successful show for Ten-Ten; we had over 200 members sign the logbook. Lowest number was 720 and highest was 77502.

I need to digress a bit as I lost my wife Marilyn, WM2W #76400 on March 3, 2017. Marilyn suffered from Pulmonary Hypertension and led a difficult struggle with the disease for 6 years. She was a super operator, friendly net controller, and just the best wife I could ever ask for. I still remember the day when she approached me telling me that she wanted to become a ham operator. She went on and obtained her Extra Class license and filled the position of the 1000+ Bar Awards manager slot. My thanks to everyone who sent cards and condolences. We all miss her terribly.

Back to the news from Dayton/Xenia. The layout of the Xenia facility was excellent. Several problems arose including traffic getting into the site. And, it rained which caused the flea market to become mired down in mud. But true to form, hams persevered and overcame and most everyone that I talked to enjoyed the hamfest. In fact, the food vendors helped make this hamfest enjoyable. Lots of different food was available as opposed to HARA Arena where a limited amount of food was for sale.

We had some new blood representing 10-10 at the Hamvention. Greg, WA3GM (Director) was there along with Josh W9HT (Vice President). Keith KR7RK (Treasurer), Linda KA6SPS and myself rounded out the members manning the booth. Our booth location was excellent and we owe a lot to KR7RK for being diligent and making the arrangements for the booth. The reservation policy for the new hamfest location was chaotic at best.

We had two 10 meter radios set up in the booth so that potential new members could make their QSOs toward membership. The radios attracted some hams to the booth as they were drawn in by the lighted dials on the radios.

Talked to the QCWA folks while at the hamfest. Preparations for the upcoming 2017 70th Anniversary Charity Cruise continues to develop. For those of you not familiar with this cruise, it will take place on October 18th through 29th and will visit several Caribbean locations including: St. Maarten, St. Kitts,

Guadeloupe, Martinique, Barbados, St. Thomas USVI, and Half Moon Cay Bahamas. Information on the cruise is available on the QCWA website. The ship will be Holland America's MS Koningsdam and reservations are made through White Travel (800) 547-4790.

10 meter propagation continues to be a hot topic for members at the Hamvention. N6OPR is getting 15 to 20 check ins per net every day, so propagation is improving. It will be interesting to see how the band shakes out in the upcoming contests.

Another topic of discussion centers on losing membership in 10-10. If anyone has ideas on how we can attract new members, please send them to me. I am good on QRZ.com. Once again, I welcome any and all suggestions from members on how we can improve our organization. The Board of Directors is here to serve our members and we do our best to serve the needs of our membership. Phone numbers and email addresses are listed for the Board of Directors and other 10-10 officers in each issue of the Ten-Ten International NEWS. If you have a question or a concern, talk to a Board member and see if we can't clear it up for you.

On a sad note, we recently had a fraudulent application submitted for a 10-10 award. One of our Managers caught the infraction and refused the award. Additionally, the Awards Manager sent the offending ham a letter detailing the reason for the disqualification and imposing a FIVE year restriction on that person when applying for new awards. Ten-Ten operates on the Honor System and will not tolerate cheating.

73 -- N0TW

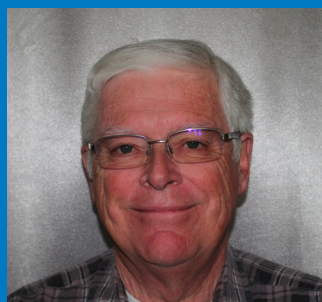
Ten-Ten Top Operator Award

This award is based upon the number of times a member's call appears on new applications. Quarterly winners are awarded a certificate. The overall winner for the year will be awarded a plaque. There are two categories; one for Net Control station and one for the current members at large.

This quarter there is a two way tie for the Top Operator award: **N5XZ Allen Brier #4530** and **KB9BPZ John Koch #77528**. The Top Net Control award goes to **N0TW Terry Webb #36547**.

NEW LIFE MEMBERS

11791	WB5LJQ	Michael Ray McCrary	LA
74641	K4RDE	Raymond "Ray" E Tillman	KY
75901	KØNM	Nizar A Mullani	TX
76219	AFØH	David Hamilton	AZ
77047	KD5FBA	Scott T Medbury	TX



Chapter Coordinator

Jim Fox, KA0ZPP
(#43428)

GENERAL NEWS

- 1) Several members (new, I assume) have contacted me wondering what the CH/CM initials mean. As a review for all, CH is "Chapter Head" and CM is "Certificate Manager." These are the two most common officers of a Ten-Ten chapter.
- 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) If your chapter is planning a special during the months of October, November or December, please let me know so I can include the details in the October newsletter.
- 4) Reminder of Quarterly Reports Due: **Past Due** (no report received during the first or second quarters when due): Channel Islands, Houston S.H.O.T., Louisiana Pelican, Route-66, Speedway. Reports received after May 30 (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 third quarter: 10-Bar-X (Aug), Bauxite (Jun), Down Under (Jun). Major League Baseball (Aug), Space Coast (Jun), Tango (Aug), Twin Cities (Jun). Note that Quarterly Chapter Reports may be sent any time. The months indicated here are the dates in 2016 in which the last report was received.

CHAPTER NEWS

- 1) Since CH Mac, K6VMN, became a Silent Key in 2016, several members of **Channel Islands** are trying to resurrect the chapter. The status and activity are uncertain and may become QRT.
- 2) **City of Roses** is suspending nets until further notice due to poor propagation.
- 3) **Santa Fe Trail** runs specials almost every month. Watch for posts on the TenMeters email list from CH Larry, KA9PCU, for details. CH Larry is also looking for an assistant to learn the ropes of running the chapter. If you are

willing to help, or want more information, contact Larry at (309) 342-5977 or (309) 299-0246.

- 4) **Colorado Centennial** will be on "summer vacation" and will resume in September.
- 5) It is not really a chapter, yet, but check out **Scouts on Ten** the "Activities" drop-down menu on the Ten-Ten website. Any members who are or were a Boy Scout or Girl Scout are instant qualifiers – all you need to do is apply.
- 6) Chapters below accept email upgrades as of May 30. 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 the event that the CM should require verification. Requirements peculiar to a particular chapter are noted.

(** indicates change)

Alii – CM WH6S, wh6s@outlook.com. Use form available from the CM.

Bauxite – CM K5BKT, k5bkt@nwla.com. Bauxite and Arkansas Visitor numbers only.

Bay Area – CM K6RDK, k6rdk@arri.net

Branding Iron – CM DL6DK, bic-cm@voits.de

Castle Craig – CM N1API, n1api@cox.net

Chesapeake Bay – CM N3TGB, n3tgb@aol.com

City of Roses – CM K7PRZ, radio97228@gmail.com **

Colorado Centennial/Colorado Frontier Gang – CM WB0CON, wb0con@comcast.net

Cradle of the Confederacy – CM K4PO, pcsalley@gmail.com

Down Under – CM ZL1AFU, zl1afu@nzart.org.nz

Fort McHenry/Cornerstone/Yodar Kritch – CM K3TUJ, k3tuj@juno.com

Gold City – CM K4QHH, rabisch@hotmail.com

Hanse – CM DL5HAN, dl5han@t-online.de

Houston S.H.O.T – CM N5MT, n5mt@aol.com

Major League Baseball – CM N6OPR, n6opr@msn.com

Minuteman/Old Ironsides – CM WA1ENO, wa1eno@hotmail.com

Neanderthal – CM PA2NJC, cm.neanderthal@online.de

New Mexico Mud Ducks – CM KM5EH, buckml@lobo.net

New Waterkant – CM DK7LA, dk7la@t-online.de

North Georgia – CM W4GKF, 10X@chazcone.com

Oregon Trail/Portland 500 – CM W7HO, w7ho@w7ho.com or w7ho@arri.net

Restoration Project – CM VA7GY, ve7ssj@shaw.ca

Santa Fe Trail – CM KA9PCU, ka9pcu@centurylink.net

Sky Blue Waters/Tin Lizzie – CM KA0ZIA, sbwtl1010@gmail.com

Space Coast – CM K5FBS, k5fbs@yahoo.com

Speedway – CM W7CAR, w7car@arri.net

Steamboat Plus – CM KD5DE, kd5de@nwla.com

Twin Cities – CM K0DBK, kzerodbk@gmail.com

If any chapter not listed accepts email upgrades or if the email listed has changed, please let me know so I can update the list. Thanks.

Jim Fox, KA0ZPP, PO Box 135 Mayhill NM 88339, email: ka0zpp10ten@gmail.com

QSL Bureau News

SUMMER 2017 QSL BUREAU REPORT

Things in the 10-10 Bureau since my last report have been very quiet. There are no new cards in the bureau to report, but that is to be expected with propagation being down. This would be a good time to remind everybody, however, that the bureau can be used to confirm Contest QSO's, not just regular QSO's. This goes for any contest, not just a 10-10 event; just make sure the party you are sending a card to is a 10-10 member.

I am still going through the cards in the pending bin, and getting them sent out as postage allows. I would still appreciate donations of postage for this project, be it a book of 10 stamps, 20 stamps, whatever you feel led to give. They can be mailed to my QRZ address.

With the spring E Skip season upon us, I hope we all get a chance to make some contacts and make the bureau a little more active.

73,
Jim, w9x #49635

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.

REPORT FOR THE 10-10 INTERNATIONAL CLUB STATION W6OI

W6OI continues to be on the air for all 10-10 QSO parties. Not much activity here in southern Wisconsin! But I keep trying! I attempt calling almost daily usually around 1400Z to 1530Z at 28355. Keep trying everyone since you never know when that short opening will occur.

The Spring Digital party was a little fun. Did manage to make a few PSK contacts into TX, NY, TN, and PA! Next 10-10 Party for PSK is our Open Season which will be June 3-4. Fire up those PSK rigs and give it a try. You will be surprised at the signals, especially if more folks start calling. Let's open up the band with a bunch of signals!! Spring CW party was quiet here in Wisconsin. Maybe next time. As some folks do, put out a notice on the ten-ten.org email list service so others know to turn on their rigs and listen for you! If you are not subscribed to the ten-ten.org email list notification services, go to the ten-ten.org website to sign up. Just click on the drop down menu "Forum/Misc", and then click on the menu item "Ten-Ten List" where you can get all the details for this free service. If you are not subscribed to this service you are missing out on a whole lot of good material that is shared with/by the members.

We again had a volunteer to operate during the Spring Digital party this past April. Thanks to ND6M, Jim, who managed to make 7 contacts. It is truly a pleasure to authorize someone interested in putting out W6OI club call.

The 10-10 Club Station, W6OI, is available for operation to any current (dues paid) member or chapter for use as a special event station. AND, also available if any member would like to operate W6OI during any of the 10-10 QSO Parties. Just send your request along with confirmation of license and paid up membership to the following or via email (treismine2@yahoo.com):

Jerry Kopstein N9AC
8041 W. Lakeshore Drive
Burlington, WI 53105

W6OI is one of three official 10-10 club stations, the others being VE9TEN (trustee Rob, VE9KM) and DL0X (trustee Henry, DL8YBM). W6OI is operated on CW by Brad, K0DBK who makes available FISTS and SKCC numbers. W6VY, Bob operates on Geratol nets to give out W6OI Geratol number and promote 10-10.

Louise, N6ELK continues to operate W6OI on the 10-10 daily nets, which meet at 1800Z on 28.380 and 28.800. Bob, N6OPR also gives out W6OI details on the daily nets if Louise is not available.

Paper chasers working W6OI can request list from Jerry, N9AC. It is available in ML format or just plain text. Listen for W6OI!

73's Jerry, N9AC



DX News

Mike Davidson, N5MT
(#24949)

The local Houston SHOT chapter had a 10-10 table at the Houston hamfest on March 25th. Helping with the table was our past President, Mel KD5DE #33513 and myself. We renewed a few members, upgraded one member to life status and received a few scholarship donations. The next big ham convention in Texas will be HamCom in Irving. We will have the same 10-10 table setup at Irving Convention Center for HamCom, the second weekend in June 9-10th. The crowd at HamCom should be twice the size of Houston because the location is between Dallas and Fort Worth and it will be an ARRL site event. So if you attend, stop by the 10-10 table and sign the book.

The season has changed to Summer for all of us in the USA and propagation on Ten is the poorest it has been in thirty years! Looking forward to Field Day, the last Saturday of June but I do not for-see much hope for Ten Meters this year. Last year our local group had about 50 contacts on Ten and our score was down twenty percent from the previous year. We will setup three tri-band yagis, one for CW, SSB and Digi. Each yagi is connected to a coax feed line that goes into a band pass triplexer so you can connect a ten, fifteen and twenty meter radio to each yagi and output three different signals from one antenna. Good luck with your local club for FD.

This past winter/spring DX season started off slowly during the first months of 2017. During the DX Contest in February-May, we heard no European stations on Ten here in Texas. Looking at all the announced events for 2017, I see fewer events than last year and I expect a below average DX season. I expect poor conditions on Ten for the next two years as this cycle reaches its final days and ends! The flux will stay in the 70's and 80's for the rest of Cycle 24 but Cycle 25 will not happen until the fall of 2019 at the earliest. Be sure to submit all logs to the LoTW system and to load your contest and logs to LoTW at least each quarter!

ClubLog's DXCC Most Wanted List. Web site is at: <https://secure.clublog.org/mostwanted.php>. North Korea P5 still is the number one most wanted country/entity.

Countries Award: There was one Basic Countries Award application submitted and rejected and no upgrades issued this quarter. **The application**

submitted for the Basic Award was determined to be a bogus/fraud application! Listing SK members as worked is never a good idea and two DX members said he was Not-In-Log! The member has been banned from any 10-10 awards for the next five years by approval of the Board of Directors! So be sure to read the Rules at the 10-10 website for all awards and do not make a mistake. If you apply for any award, get the correct forms at the 10-10 website.

I am posting this to the 10-10 website on June 1st.

GENERAL 10-10 DX REPORTED IN THE PAST QUARTER:

3D Rotuma Island. Tony **3D2AG** #72719, was on Rotuma Island using call 3D2AG/P most all of April.

C6 Bahamas. Bob **K6UDA** #76315, was on San Salvador Island from March 11-18th using call C6AKA with a friend when they were not scuba diving.

5U Niger. A DXpedition using call 5U5R started on March 9-21st on all bands/modes. Dave **K3LP** #13394 was the only 10-10 member in the group of ops.

9N Nepal. A group used call 9N7EI from Nepal from March 8-20th. I saw 50 reports of activity on Ten meters from March 12-19th, none reported from the USA and all of the reports were from 0500-0800 UTC. They were heard on Ten in Australia, India and Thailand. This would have been the first time any 10-10 activity would have been possible from Nepal! 10-10 Members were: Pat **EI9HX** #72414, Declan **EI9HQ** #71019 and Thos **EI2JD** #73610. I visited their website and they had some great pictures and a short video to watch. Web: <https://9N7EI.com>.

GD Isle of Man. Dr. Markus Dornach **DL9RCF** #66045, used call GT4BRS from April 15-22nd.

HC Ecuador. John **K7HV** #38518, used call HC1HB from March 3rd to April 13th from Quito, Ecuador.

HR Honduras. Gerard **HR5/F2JD** #63443, visited Honduras from Jan 28th to March 14th. His online log is: <http://lesnouvellesdx.fr/voirlogs.php>.

J6 St. Lucia. Will **K9HZ** #2618, used call J68HZ from April 1-8th on St. Lucia. Then Stephen **WF2S** #45135 and Ralph **K1ZZI** #40480, arrived on St. Lucia from April 18-27th at the Bay Guesthouse in Gros Islet. Their radio was a K3S into a vertical antenna sending CW, SSB and Digi.

K USA. Louis **W0FK** #8677, operated from Longboat Island, Florida from March 18-31st.

KH2 Guam. Toshi **J13ERV** #39995, was active from the Guam Contest Club station during the WPX contest in May.

KP2 US Virgin Islands. Tony **N2TK/KP2M** #22425, was on during the DX SSB contest on March 4-5th.

P2 Papua New Guinea. Haru **JA1XGI** #55571, visited New Britain Island from April 6-12th using call sign P28VXG on SSB, CW and Digi. Visit his website at: Island.geocities.pj/P29vacation/.

P40 Aruba. Robert **W5AJ** #11640, again operated call P40P, during the DX SSB contest March 4-5th. LoTW.

PJ2 Curacao. Jeff **K1ZN** #60508, was with a group on Curacao using call PJ2T during the DX contest in March.

PJ7 St. Maarten. Ed **WA1ZAM** #35435, was on the island from March 18th to April 3rd using SSB and RTTY. Jeff **PJ7/VA3QSL** #73406, operated holiday style from St. Maarten from April 2-8th on CW, SSB and Digi. LoTW.

T2 Tuvalu. Tim **NL8F** #32796, was on Tuvalu from March to April 13th on SSB and Digi using call T2TT.

V3 Belize. Bob Church **K7YB** #35676, has moved to San Ignacio, Belize and is using call V31YB. He is putting up antennas on all bands. Bob has operated from Belize in 2013 and 2014. Its great to see a resident ham station in this country who is a 10-10 member.

V4 St. Kitts and Nevis. Thaire **W2APF** #50022, operated as V47JR from March 19th to April 1st.

V7 Marshall Islands. Haru **JA1XGI** #55571, was on Majuro Island, IOTA OC-029, sometime in May.

VP5 Turks & Caicos Islands. Clint **VP5/W9AV** #75958 was on the island from March 18-21st. Web site: www.qrz.com/db/vp5/w9av. Jim **K3NK** #25287 and Joe W3HNK were in Providenciales from April 11-18th. All bands CW, SSB and Digi. LoTW. John K4BAI #45389, operated the WPX CW contest May 27-28th as VP5M.

Z2 Zimbabwe. Tom **KC0W** #67688, is back on the road again this time from Zimbabwe Africa, using call Z25DX until June 18th. He likes CW on all bands. No LoTW.

ZF Cayman Islands. Royce **KE5TC** #32267, was on Grand Cayman from March 21-26th using call ZF2TC. He only used 100 watts to a vertical for CW, SSB and PSK31.

AI **KZ3AB** #63030, was active on HF from April 29th to May 6th using call ZF2AB from Grand Cayman. The KZ5 prefix many years ago, belonged to US personnel in the Panama Canal Zone before September 30, 1979. Today, the KZ5 prefix is now used in the USA fifth call area and the Canal Zone became a deleted country in October 1979.

UPCOMING DX & NEW 10-10 ACTIVITY:

3Y0 Bouvet Island. The following members have been issued a license for Bouvet Island. Dmitri **KP2P/RA9USU** #54234 and Mark **ON4WW** #49103.

Another group of ops have plans in early 2018 to go to Bouvet so will the two groups conflict with each other? Web: www.bouvetdx.org.

9H Malta. Haru **JA1XGI** #55571, will be active as 9H3XG from Malta between June 7-12th on CW and RTTY.

9U Burundi. A DXpedition to Burundi Africa, will take place from November 6-17th by a large group of ops. Team leader Antonio **IZ8CCW** #70101 will lead the group into an area of Africa that is sought after for radio. The only other 10-10 member is Gerard **F2JD** #63443, who likes CW.

FJ St. Barthelemy Island. A group of four operators will be on Pointe Milou, St. Bart from October 17-26th. The only 10-10 member is Greg **W0ZA** #15171. They will operate CW, SSB and RTTY into a SteppIR vertical and a big Hexbeam, on whatever band is open.

FP St. Pierre & Miquelon. Eric **KV1J** #31247, will return for his eleventh trip to Miquelon from July 4-18th. Eric operates mostly SSB or RTTY and will do some satellite Q's this trip. All logs will be upload to LoTW. Website: www.KV1J.com/FP/July17.html.

GB England. Cis **ON6LY** #73607, will be operating in the IOTA contest July 29-30th as GB9IOW with friends.

HL South Korea. Mike **K5MDK/HL5ZEG** #75783, will be in S. Korea from July 8th to August 10th mostly weekends when he is not on a work assignment.

OY Faroe Islands. Bill **K2HVN** #14073, will be in Torshavn, Faroe Islands from June 13-26th. He normally likes CW but he may do some SSB. QSL his home call.

PJ7 St. Maarten. John **PJ7/W9KXQ** #20018, will operate with friends from St. Maarten from June 14-28th.

T31 Central Kiribati. A twelve day DXpedition is being planned for October 2017 to Kanton Island using call sign T31W. Members are: Arnie **N6HC** #29959, and Gene **K5GS** #15119. Website: www.T31W.com.

TI Costa Rica. Kam **N3KS** #11541 and friends, will use call TE8DX on Chira Island, Costa Rica from June 8-12th.

VE Canada. Garry **VE3XN** #10120, has a special call sign VX3100 that he can use all year but he has not been reported on Ten meters by DXSummit. The VX prefix calls are allocated by Industry Canada for special occasions.

ZL New Zealand. Roly **ZL1BQD** #19039 will be using a special call sign ZL40BQD all year 2017. LoTW.

MISCELLANEOUS ITEMS & NOTES:

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>.

Propagation: I expect the solar flux to range from 69-89 during the summer and into the third quarter of 2017. The Summer Solstice is on June 21st, when HF propagation will shift to north/south propagation paths. Just a few days after the Solstice will be Field Day. Current prediction is for a solar flux of just under 80 for Field Day 2017!

The peak solar flux of this cycle was in February 2014 with a value of 170.3. Did you know that sunspot observations started in February 1755 which was the beginning of solar cycle #1. Our solar cycle #24, has been the weakest solar cycle in more than a 100 years and it is slowly gliding through the solar minimum phase which would end with the beginning of cycle #25, probably in two to three years. With no sunspots flaring, the X-ray output from the sun has flattened. The natural cycle of the sun is about 11 years and we are only 8 years into cycle #24. Looking at the NOAA solar flux graph, we are at the same spot in cycle #23 during the early months of 2007. From that point in cycle #23, it took three more years before the solar flux turned upwards and cycle #24 started. I predict cycle #25 will start in the winter of 2019 and it will be even weaker than our current cycle #24!

The maximum solar flux for each month of 2017 was: Jan 87, Feb 83, March 91, April 112, May 82.

The minimum flux for the same period 2017: Jan 71, Feb 72, March 70, April 71, May 69.

On June 1st, the solar flux was 76, the A index was 4 and K index 3. The sun has been quiet for weeks. The solar flux high for May 2017 was 41 points lower than the May 2016 high of 123.

My Prediction: Over the next four months, the best conditions: June 23-25th, July 20-23rd, Aug 16-20th and Sept 12-14th. For USA, expect no chance of DX to Europe or Asia with a 25% chance of DX to S. America and the S. Pacific, later in the day. Listen to the beacons from 28.175-28.300 so you will know which direction the DX is coming.

NEW 10-10 DX MEMBERS' MARCH TO MAY 2017:

March: None; **April:** None; **May:** None.

Thanks to the QRZ-DX, The Daily DX by W3UR #25731 and the Ohio/Penn DX Bulletins. Info to Mike Davidson, 3518 Bellefontaine, Houston, TX 77025 USA Email: N5MT@aol.com.

DX IS! 73 Mike Davidson N5MT #24949

Copyright © 2017 by N5MT

www.ten-ten.org

[TOC](#)

9



Mel KD5DE and Mike N5MT supporting the 10-10 booth at the Hamcon in Housotn, TX.



10-10 Booth workers at the Dayton Hamfest. Seated: Linda KA6SPS and Greg WA3GM. Standing: Josh W9HT, Keith KR7RK and Terry N0TW

Daily Nets 28.380 & 28.800 MHz at 1800Z (except Sunday)



Net Report

Bob Farrow, N6OPR
(#45715)

Net reports for 1st Quarter 2017

MONDAY NETS

28.38 MHz			28.80 MHz		
DATE	TOTAL	NO 10X#	DATE	TOTAL	NO 10X#
2-Jan	2	0	2-Jan	10	0
9-Jan	2	0	9-Jan	11	1
16-Jan	2	0	16-Jan	11	0
23-Jan	4	1	23-Jan	10	1
30-Jan	4	0	30-Jan	11	1
6-Feb	2	0	6-Feb	12	0
13-Feb	2	0	13-Feb	12	0
20-Feb	2	0	20-Feb	14	4
27-Feb	2	0	27-Feb	12	0
6-Mar	3	0	6-Mar	11	0
13-Mar	3	0	13-Mar	9	0
20-Mar	2	0	20-Mar	9	0
27-Mar	2	0	27-Mar	16	2

TUESDAY NETS

28.38 MHz			28.80 MHz		
DATE	TOTAL	NO 10X#	DATE	TOTAL	NO 10X#
3-Jan	2	0	3-Jan	0	0
10-Jan	18	9	10-Jan	0	0
17-Jan	2	0	17-Jan	0	0
24-Jan	7	2	24-Jan	0	0
31-Jan	4	0	31-Jan	0	0
7-Feb	7	1	7-Feb	0	0
14-Feb	5	0	14-Feb	0	0
21-Feb	4	1	21-Feb	0	0
28-Feb	4	1	28-Feb	0	0
7-Mar	3	0	7-Mar	0	0
14-Mar	2	0	14-Mar	0	0
21-Mar	5	0	21-Mar	0	0
28-Mar	4	0	28-Mar	0	0

WEDNESDAY NETS

28.38 MHz			28.80 MHz		
DATE	TOTAL	NO 10X#	DATE	TOTAL	NO 10X#
4-Jan	2	0	4-Jan	10	0
11-Jan	2	0	11-Jan	5	0
18-Jan	20	6	18-Jan	7	0
25-Jan	2	0	25-Jan	4	0
1-Feb	5	1	1-Feb	5	0
8-Feb	3	0	8-Feb	6	0
15-Feb	7	1	15-Feb	6	0
22-Feb	5	1	22-Feb	4	0
1-Mar	11	4	1-Mar	5	0
8-Mar	2	0	8-Mar	7	0
15-Mar	2	0	15-Mar	3	0
22-Mar	3	0	22-Mar	5	0
29-Mar	2	0	29-Mar	6	0

THURSDAY NETS

28.38 MHz			28.80 MHz		
DATE	TOTAL	NO 10X#	DATE	TOTAL	NO 10X#
5-Jan	3	0	5-Jan	2	0
12-Jan	3	0	12-Jan	2	0
19-Jan	5	1	19-Jan	2	0
26-Jan	5	1	26-Jan	2	0
2-Feb	3	1	2-Feb	3	0
9-Feb	4	1	9-Feb	4	0
16-Feb	4	0	16-Feb	2	0
23-Feb	3	0	23-Feb	2	0
2-Mar	14	8	2-Mar	4	1
9-Mar	2	0	9-Mar	3	0
16-Mar	2	0	16-Mar	2	0
23-Mar	2	0	23-Mar	2	0
30-Mar	2	0	30-Mar	3	0

FRIDAY NETS

28.38 MHz			28.80 MHz		
DATE	TOTAL	NO 10X#	DATE	TOTAL	NO 10X#
6-Jan	2	0	6-Jan	7	0
13-Jan	2	0	13-Jan	7	0
20-Jan	0	0	20-Jan	7	0
27-Jan	0	0	27-Jan	7	0
3-Feb	2	0	3-Feb	7	0
10-Feb	2	0	10-Feb	6	0
17-Feb	2	0	17-Feb	7	0
24-Feb	2	0	24-Feb	9	0
3-Mar	0	0	3-Mar	10	0
10-Mar	0	0	10-Mar	7	0
17-Mar	0	0	17-Mar	5	0
24-Mar	0	0	24-Mar	5	0
31-Mar	0	0	31-Mar	12	2

SATURDAY NETS

28.38 MHz			28.80 MHz		
DATE	TOTAL	NO 10X#	DATE	TOTAL	NO 10X#
7-Jan	2	0	7-Jan	0	0
14-Jan	2	0	14-Jan	0	0
21-Jan	2	0	21-Jan	0	0
28-Jan	2	0	28-Jan	0	0
4-Feb	2	0	4-Feb	0	0
11-Feb	2	0	11-Feb	0	0
18-Feb	2	0	18-Feb	0	0
26-Feb	2	0	26-Feb	0	0
4-Mar	2	0	4-Mar	0	0
11-Mar	2	0	11-Mar	0	0
18-Mar	2	0	18-Mar	0	0
25-Mar	2	0	25-Mar	0	0
0-Jan	0	0	0-Jan	0	0

10-10 Has Two Official Daily Nets**28.380 and 28.800****Both Run At 1800z****Every Day Except Sunday****Listen And If You Can Hear Us Join IN!!!****10-10 NET CONTROL STATIONS****ALL NETS BEGIN AT 1800Z**

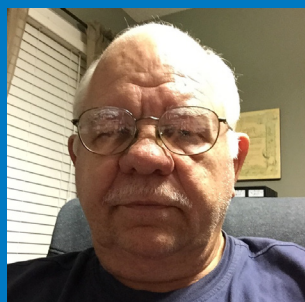
Mon (28.380)	Alan, WB9WZI	#76209	IL
Mon (28.800)	Doc, WB6OJB	#70675	CA
Tues (28.380)	Ray, K7CWS	#50288	AZ
Tues (28.800)	Open. Contact N6OPR for info		
Wed (28.380)	Open. Contact N6OPR for info		
Wed (28.800)	Louise, N6ELK	#36654	CA
Thu (28.380)	Bob, N6OPR	#45715	AZ
Thu (28.800)	Robert, KQ4PK	#63201	NC
Fri (28.380)	Terry N0TW	#36547	FL
Fri (28.800)	Bob, K6DNR	#75386	CA
Sat (28.380)	Dan KC8IM	#31959	MI
Sat (28.800)	Open. Contact N6OPR for info		

Sunday **NEVER ON SUNDAY**

Licensed at least 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**



QSO Parties

Dan Morris, KZ3T
(#41015)

2017 SPRING DG QSO PARTY

April 29 -30

TOP TEN

CALL	10-10#	CTX W	CTX WO	TOTAL
1. N4ZCG	56067	17	4	38
2. KJ4RV	37776	17	1	35
3. KE4DEV	64796	15	3	33
4. N3GTY	50585	11	3	25
4. AK4YS	75328	12	1	25
5. N4ERM	34524	11	1	23
5. WA2HMM	40510	11	1	23
6. KW4BG	47350	8	0	16
7. NS5R	36388	7	1	15
8. KI4EZL	74359	7	0	14

CALL AREA ORDER

CALL AREA 0

CALL	10-10#	CTX W	CTX WO	TOTAL
W0RTV	13962	2	0	4

CALL AREA 2

CALL	10-10#	CTX W	CTX WO	TOTAL
WA2HMM	40510	11	1	23

CALL AREA 3

CALL	10-10#	CTX W	CTX WO	TOTAL
WA3GM	46927	5	0	10

CALL AREA 4

CALL	10-10#	CTX W	CTX WO	TOTAL
N4ZCG	56067	17	4	38
KJ4RV	37776	17	1	35
KE4DEV	64796	15	3	33
N3GTY	50585	11	3	25
AK4YS	75328	12	1	25
N4ERM	34524	11	1	23
KW4BG	47350	8	0	16
KI4EZL	74359	7	0	14
KI4EZK	77510	7	0	14
KA5VZG	46596	2	0	4

CALL AREA 5

CALL	10-10#	CTX W	CTX WO	TOTAL
NS5R	36388	7	1	15
KM5FF	50356	3	0	6
KA2ZGW	45188	1	0	2

CALL AREA 7

CALL	10-10#	CTX W	CTX WO	TOTAL
KA7IVB	36769	3	1	7
KR7RK	63324	1	0	2

QRP

CALL	10-10#	CTX W	CTX WO	TOTAL
N3GTY	50585	11	3	25
KI4EZL	74359	7	0	14
KI4EZK	77510	7	0	14

CHAPTER ENTRIES

CHAPTER	LOGS	PTS
POSSUM TROT	10	248
NM MUD DUCKS	1	6
GATEWAY	1	4

CLUB ENTRIES

CALL	10-10#	CTX W	CTX WO	TOTAL	OPS
K4MN	24874	11	3	25	N3GTY

2017 SPRING CW QSO PARTY**May 6-7****TOP TEN**

CALL	10-10#	CTX W	CTX WO	TOTAL
1. KN4Y	17757	19	7	45
2. HP1RIS	75617	14	4	32
3. KJ4RV	37776	13	1	27
4. N4ZCG	56067	9	0	18
5. N4ERM	34524	7	1	15
6. KU4W	20986	7	0	14
7. N5DTT	73679	6	0	12
8. N3GTY	50585	5	0	10
9. KZ3T	41015	3	2	8
10. N5MT	24949	3	0	6

CALL AREA ORDER**CALL AREA 3**

CALL	10-10#	CTX W	CTX WO	TOTAL
WA3JXW	4377	1	0	2

CALL AREA 4

CALL	10-10#	CTX W	CTX WO	TOTAL
KN4Y	17757	19	7	45
KJ4RV	37776	13	1	27
N4ZCG	56067	9	0	18
N4ERM	34524	7	1	15
KU4W	20986	7	0	14
N3GTY	50585	5	0	10
KZ3T	41015	3	2	8
KI4EZL	74359	3	0	6

KI4EZK	77510	3	0	6
--------	-------	---	---	---

CALL AREA 5

CALL	10-10#	CTX W	CTX WO	TOTAL
N5DTT	73679	6	0	12
N5MT	24949	3	0	6

CALL AREA 7

CALL	10-10#	CTX W	CTX WO	TOTAL
KR7RK	63324	0	1	1

QRP

CALL	10-10#	CTX W	CTX WO	TOTAL
KJ4RV	37776	13	1	27
N3GTY	50585	5	0	10
KI4EZL	74359	3	0	6
KI4EZK	77510	3	0	6

COUNTRY ENTRIES**PANAMA**

CALL	10-10#	CTX W	CTX WO	TOTAL
HP1RIS	75617	14	4	32

CHAPTER ENTRIES

CHAPTER	LOGS	PTS
POSSUM TROT	9	114
HOUSTON SHOT	3	24

CLUB ENTRIES

CALL	10-10#	CTX W	CTX WO	TOTAL	OPS
K4MN	24874	5	0	10	N3GTY
NM5H	68588	3	0	6	N5MT

CHECK LOGS

CALL	10-10#	CTX W	CTX WO	TOTAL	OPS
HP1AC	10107	16	1	33	0



QCWA

70TH ANNIVERSARY CHARITY CRUISE

Message from the QCWA President

Greetings all QCWA Members and Friends, and those interested in celebrating with us on this exciting cruise. You need not be a QCWA member or an Amateur Radio operator to join us. All are WELCOME!

The Quarter Century Wireless Association, Inc. (QCWA) 70th Anniversary Charity Cruise event is to celebrate and commemorate our 70th Anniversary of the founding of QCWA, on December 5th, 1947.

We will sail the Caribbean for 11 days on Holland America's newest ship, the Koningsdam, visiting St. Maarten, Guadeloupe, Barbados, Martinique, St Kitts & Nevis, St Thomas and the Bahamas before returning to Ft Lauderdale, FL.

Book with White Travel <http://www.whitetravel.com/> to be part of the

Cruise Itinerary

Date	Port	Arrive	Depart
Oct. 18	Fort Lauderdale		4:00PM
Oct. 19-20	At Sea		
Oct. 21	Philipsburg, St. Maarten	8:00AM	5:00PM
Oct. 22	Point-A-Pitre	8:00AM	5:00PM
Oct. 23	Barbados	8:00AM	5:00PM
Oct. 24	Fort-de-France	8:00AM	5:00PM
Oct. 25	Basseterre	8:00AM	5:00PM
Oct. 26	St. Thomas	8:00AM	5:00PM
Oct. 27	At Sea		
Oct. 28	Half Moon Cay	8:00AM	3:00PM
Oct. 29	Fort Lauderdale	7:00AM	

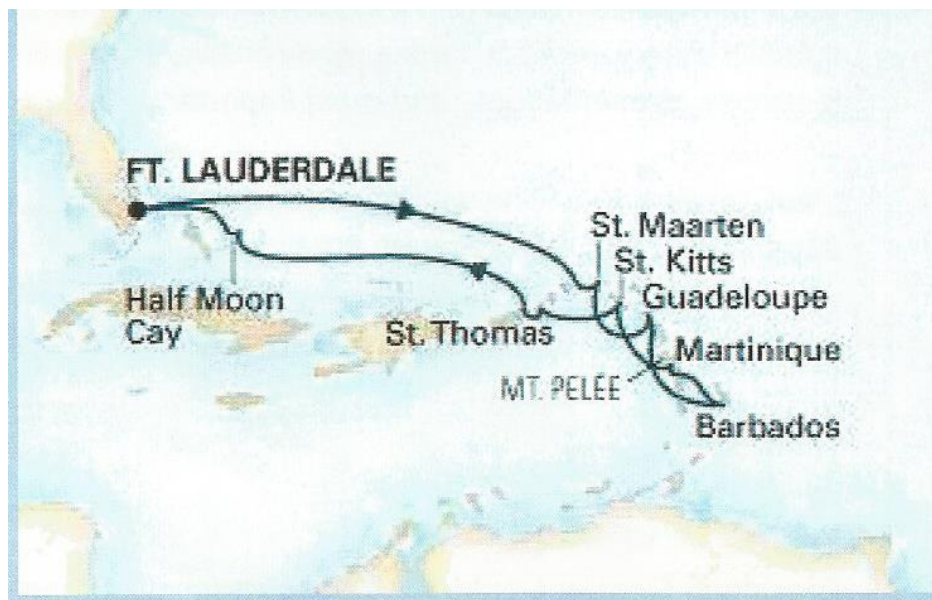
group functions, including complimentary cocktails parties, and receive a complimentary Pinnacle Grill dinner. Be part of the fun, festivities, presentations, and most importantly the camaraderie.

I look forward to sailing with all of you, leaving Ft. Lauderdale on October 18th, 2017 to share our experiences and memories on the high seas. We plan to have presentations on sea days, and if any of you cruising with us wish to present a program, we would love to hear from you. You can contact me personally at the e-mail address below.

73

Ken Oeike, VE6AFO

President, Quarter Century Wireless Association, Inc. president@qcwa.org



Pixie Project Notes

I became involved with kit building at the very beginning of my Amateur experience. The pixie project began in the same time frame. The thrill of "birthing a transceiver" as well as the economic advantages made this an option that fit my needs.

The pixie project began in 1982 when GM3OXX designed the FOXX transceiver. It was unique on several fronts. It used only 5 transistors, had both a side tone and rit incorporated, and for the first time used the same bipolar device as the transmit PA and the receive mixer. It became known as the Pixie transceiver and was rated at 200 mW on 40 meters. With the advent of the LM386 audio amp, the design was revamped and became the pixie2. The pixie2 and its variations are the most popular and are found on all bands with various mods. Some using VXO circuits and some with multiple PA stages producing nearly 1 watt.

There was a pixie3 variant containing some enhancements, but with the removal of the CW requirement and appliance oriented Amateurs, the project moved to the background. Only those of us that get high on the fumes from solder continued experimenting.

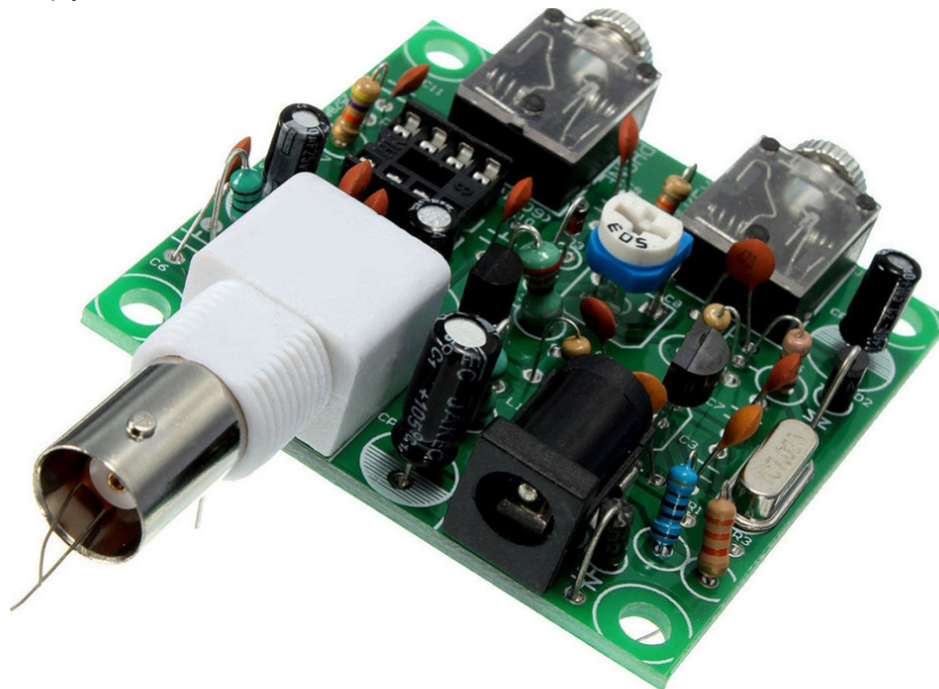
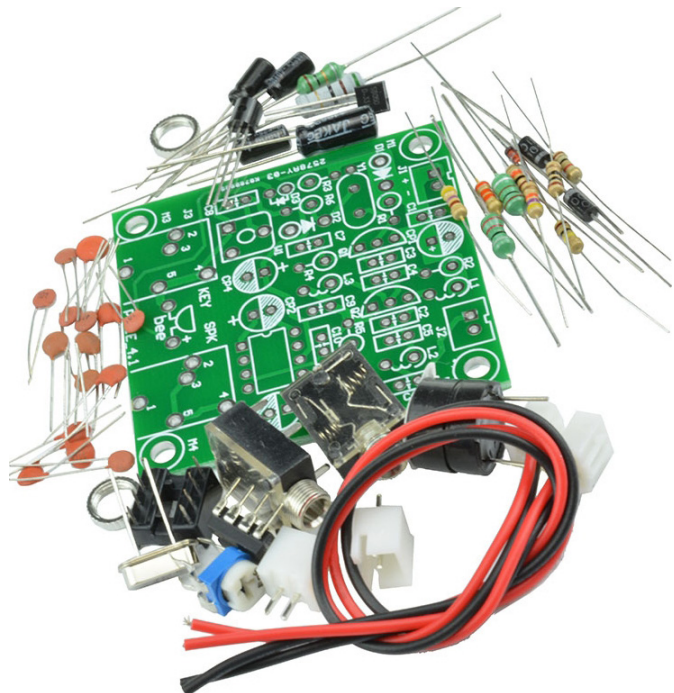
You will find multiple methods of construction. Some using transfers and laser printed etched circuit boards. Some using trepanning to cut circular pads on

the circuit boards to create soldering islands. Now those of us that do not post pictures of our pixies use what is called Manhattan construction. I cut out small 5/16" square blocks from a single sided copper clad board and epoxy them to the main circuit board at the locations I desire the components. This master craftsmanship is called "ugly construction".

Then all of a sudden the Chinese market began producing the pixie 4.1 kits. These kits were first around \$10 US, but now in the late Spring of 2017 you can get them for less than \$3 US with free shipping. With that in mind, I will dwell on them and a modification to 10 meters since they are shipped with a 7.032 crystal. If this article finds favor with the membership, maybe some other engineering type can contribute.

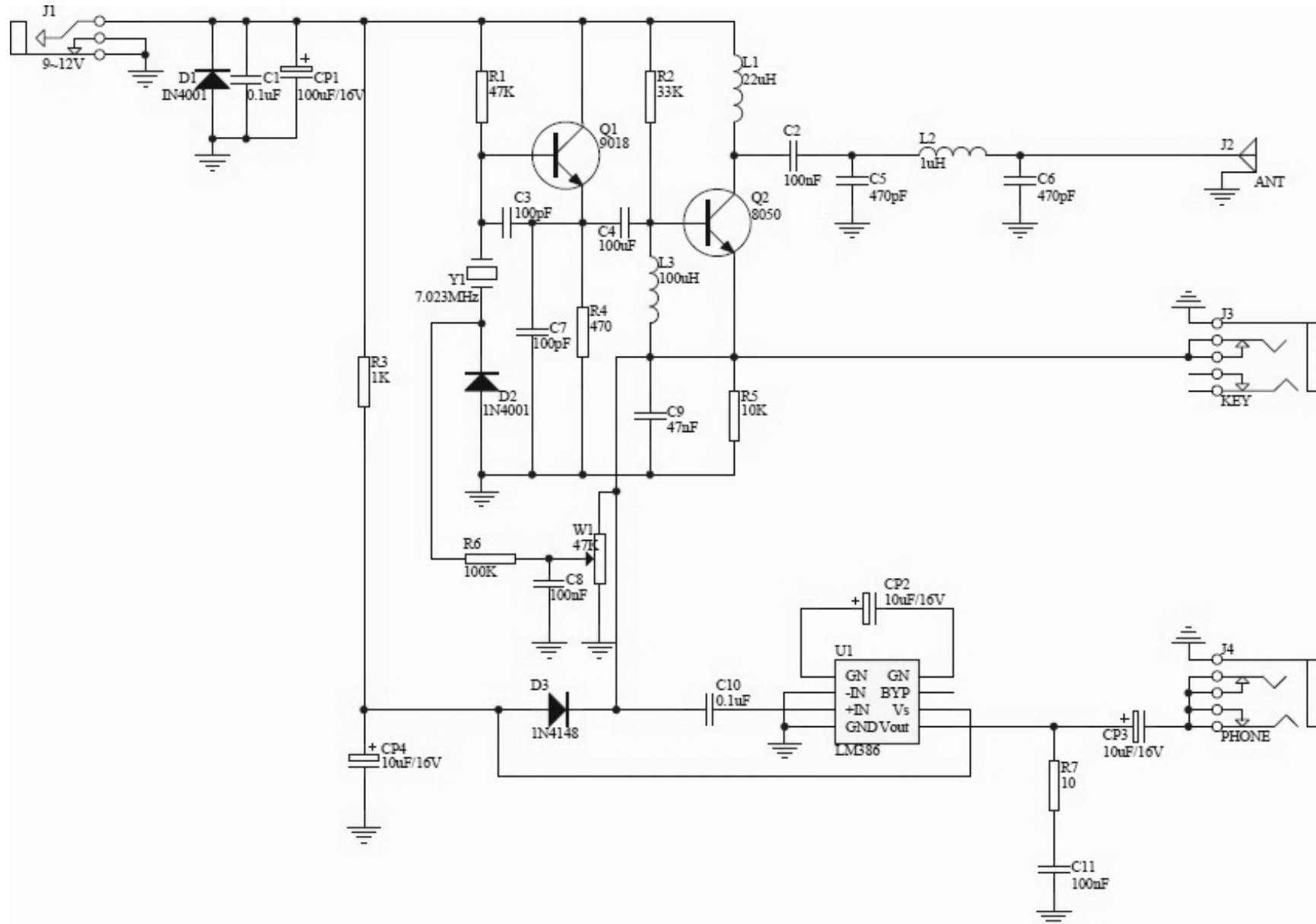
The pixie 4.1 circuit board is only 2" square. The quality of the board itself does not lend to removal and replacement of components. With this in mind, it might behoove one to order more than one kit. Build one as designed and then build the second modified to 10 meters. Note that 7.023 is in the Extra Class band. Therefore you might contact QRPME or another source for a crystal within your license privileges.

The image on the left is what is contained in the Pixie 4.1 package. An assembled transceiver is shown on the right. Please note some variations contain a bnc antenna connector and a DC receptacle. Others as on the left simply wires and sockets.

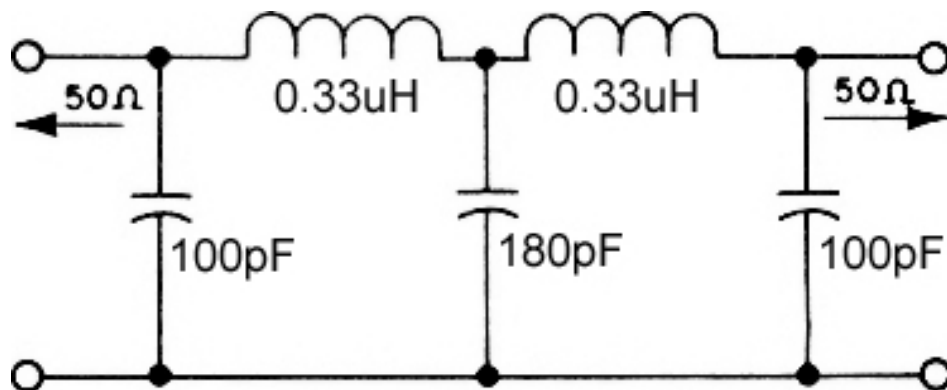


Below is the schematic of the Pixie 4.1. It can be modified for any band by changing the band pass filter and the crystal. You can easily find a conversion to every band except 10 on the net. Kit developers tend to shy away from 10 meters for several reasons. The band is so large to create a kit to cover it all would be a real task. Another issue is the top end of the HF spectrum creates some filtration challenges.

But for those of us that are dedicated to 10 all things are possible. First of all you will need to acquire a crystal for 28.060. Currently this is possible, but with the loss of our major crystal supplier it may be difficult in the future. Ceramic resonators are not available that far up the spectrum. Now to the low pass filter. Replace L2 with a 33 μ H inductor, and C5-C6 with 100 pF ceramic disk. I prefer



a multi stage band pass and if you can get to a spectrum analyzer you will be able to see why. The schematic for the band pass I am using is below.



One little note. You may want to reduce the value of the coupling capacitor at the base of the final PA (C4). It seemed to help with power out. When installing the crystal, leave some space between it and the board. A little design flaw can create big smoke. NEVER put a linear amp behind a pixie. If you do, your popularity will suffer greatly. At 1 watt or less things like clicks and chirps are not very noticeable, but a 5 or above most hams will not want to work you.

Let the Editor know if you want to continue these type of articles. Contact me if you need some pixie help.

Mel Sojka KD5DE #33513



Mel KD5DE, Mike M5MT and Allen N5XC in booth at Houston Hamfest.

NOTE ON 10-METER ANTENNA TUNERS

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.

There are many excellent tuners (ATUs) on the market that will match at 80 or 160 meters. On 10, the match may be more of an illusion than an effective reality with some designs. If you are a dye-in-the-wool 10-meter operator and use an antenna system that calls for an antenna tuner, you may be better off building your own. So what is wrong with the commercial tuners? (Remember, not all of them are wrong. Compare the points made here with the features you see when you think about buying one.) A number of things go wrong in the designs aimed at covering 160-10 meters.

1. The basic design: Most ATUs use a T-network with series capacitors and a shunt inductor, as schematically show in Figure 1.

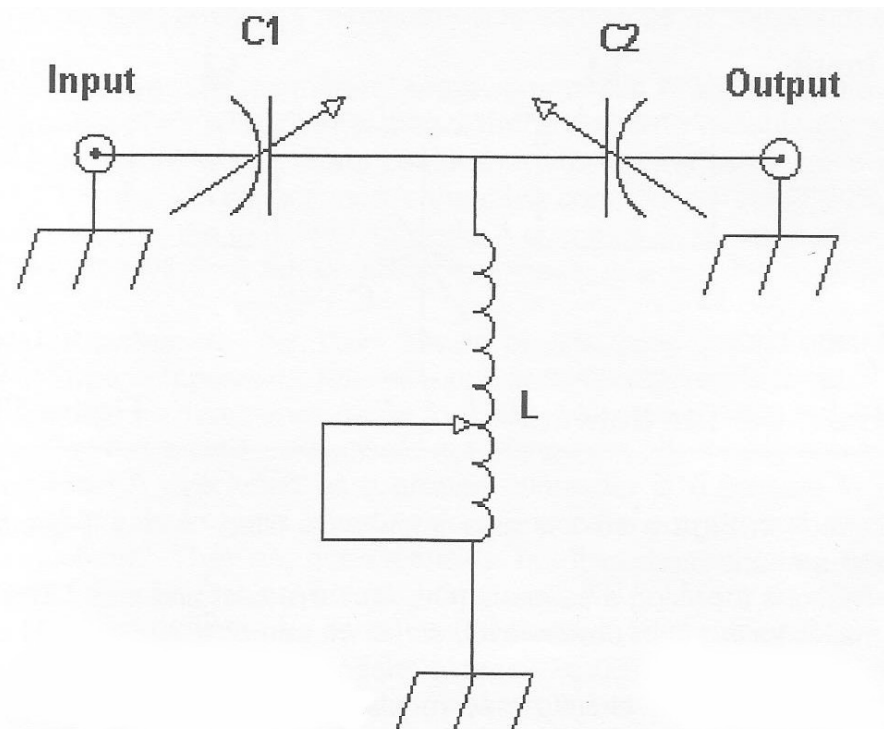


Figure 1. The C-L-C Tee Network

The design is a high-pass filter and provides little, if any, suppression of harmonic energy. One can argue that we should not rely on the ATU to do the job our rig's output circuitry should be doing. That argument is sound, but if there is a design that will also provide some harmonic energy suppression, it may be preferable. Two designs fill the bill.

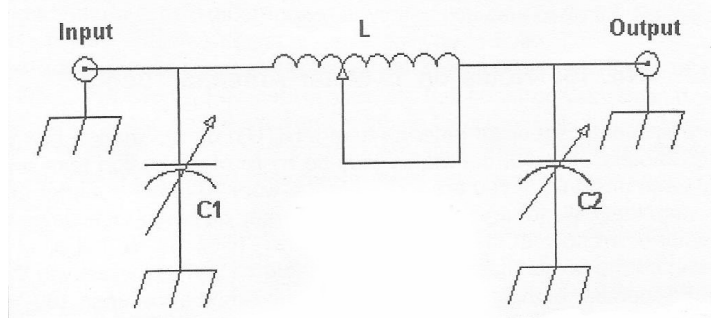


Figure 2. The PI Network

Figure 2 shows a PI network with shunt capacitors and a series inductor. It is inherently a low-pass filter.

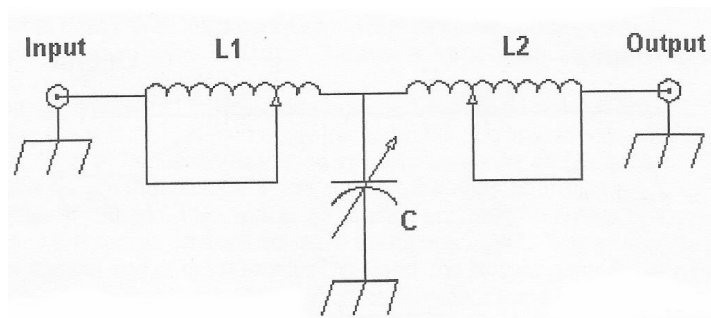


Figure 3. The L-C-L Tee Network

The circuit in Figure 3 is also a low-pass filter: it is T-circuit with series inductors and a shunt capacitor.

The reasons for using a series-C (C-L-C) T are cots and size. The components for it are smaller for a given power level, since we can fit a 20+ μH coil (rotary or tapped) alongside a pair of 250 pF variable capacitors in a compact case. By contrast, the inductors for the other circuits may require up to and over 30 μH , and the capacitor for the series-L (L-C-L) may need values up to 1000 pF. That is, if you want to tune 80 or 160. Moreover, two roller inductors cost more than the 2 capacitors of the C-L-C T circuit.

If you only want to cover 10 meters with your tuner, then the values of the components drop. A 5 μH inductor (or 2) and a 250 pF air variable (or 2) give all the range anyone should need for 10.

2. Tapped inductors: A tapped inductor may do the job you require, but for some antenna situations, you may not be able to find the 1:1 SWR point. That is not fatal if you can find a point under 2:1. However, a good rotary inductor (or 2 in the series-L T circuit) is superior, since there is no required setting that is unavailable to you. You can find some good near bargains in rotary inductors at hamfests. However, inspect them carefully for quality. The same potentials and precautions apply to large variable capacitors.

3. High-value components: The higher the highest value of a capacitor or coil, the higher the lowest value. The large frames of high-value rotary inductors may limit the lowest value to well over 1 μH . Capacitors are even worse, because the high maximum value does not tell the whole story. Usually, capacitors follow the rule, but you also have to watch out for construction. I have an old military capacitor with a maximum value of 35 pF. Unfortunately, its lowest value is 17 pF. It is built within a set of frame plates that surround the stators and limit how low it can go. By contrast, a 100 pF old E. F. Johnson capacitor in one of my units has a minimum value of about 10 pF. Its supporting metal work consists of two small plates on either end of the unit. If you roll your own, look for the capacitor's minimum value as well as its maximum value.

4. Closed tight cases: On ten meters, some commercial ATUs achieve a match more with stray capacitance and inductance than with the higher Q variable components that are supposed to do the work. Steel cases that cut the inductive fields of coils and provide several pF of shunt capacitance to the other components complicate and usually hinder the basic work of the matching network. A spacious case, however much against the grain of today's stylistic fetish of ultracompactness, is a plus for an ATU.

5. Poor ground paths: Ideally, there should be one good ground point for the ATU network. With large components, this condition is often impossible to attain. However, grounding should be as direct and compact as possible – and as near to the ground lugs of the coax sockets as possible. It should not rely on the bite of a lock washer through a painted surface. A rivet used as a ground connector is a prelude to malfunction. There are no shortcuts to good, short, wide ground paths and good mechanical and electrical connections. They are not expensive, but they do take care.

This list of difficulties is not an indictment of all ATUs. Many units have taken the trouble to be the best they can be as 10 or 160 through 10 meter units. However, you can probably do better yourself. For 10 (or realistically, 10-20 meters), a PI or series-L T circuit is achievable with parts you can obtain from hamfests. A PI might use a 5 to 10 μH inductor with a pair of 5 to 10 μH rotary inductors and a couple of 250 or 300 pF variable capacitors, with a switch to bring them into play either one or both at a time. A surplus or home brew case with plenty of room helps ensure that strays are minimized, as do well-planned ground paths. Consider a plexiglass case for the ultimate in avoidance of strays. And, of course, pay special attention to the routing of the common ground paths.

Remember, multiband is not always the most efficient, even if it is the most compact. The bands that take the beating are the ones at the high and low ends of the multiband range. Then meters, unfortunately, is one of those ends. Hence, if you use a 10-meter antenna system calling for an ATU, consider building yourself a customized unit with all the advantages and none of the difficulties of the general purpose tuners.

TEN-TEN NET GUIDE

As of May 30, 2017

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	Houston SHOT	Houston, TX	28488
SUN	0300	0400	Chief Seattle	Seattle, WA	28430	WED	0200	0300	10 Bar X	El Paso, TX	28445
SUN	1300	1400	Arlington	Arlington, VA	29200	WED	1400	1500	EU DX/Branding Iron	Bergamen, DL	28355
SUN	1400	1400	Neanderthal	Leichlingen, DL	28355**	WED	1700	1700	Gold City	Rutherfordton, NC	28425
			Chapter			WED	1930	1930	Route-66	Boonville, IN	28370
SUN	1630	1730	Possum Trot	Raeford, NC	28345	THU	0001	0100	Cradle of the	Pike Road, AL	28350
SUN	1700	1700	Major League Baseball	Gilbert, AZ	28380				Confederacy		
						THU	0100	0200	Gateway	St. Louis, MO	28650
SUN	1800	1900	Portland 500	Portland, OR	28350	THU	0100	0100	Cow Town	Arlington, TX	28460
SUN	1900	2000	Oregon Trail	Dallas, OR	28330	THU	0100	0200	Milwaukee	Milwaukee, WI	28365
SUN	1930	1930	North Georgia	Atlanta, GA	28610	THU	0230	0330	Windfarms	Livermore, CA	28485
SUN	2030	2030	Santa Fe Trail	Galesburg, IL	28345	THU	0230	0330	Up The Crick	Eugene, OR	28450
SUN	2100	2200	Possum Trot	Raeford, NC	28150 CW	THU	0300	0400	Chief Seattle	Seattle, WA	28430
MON	0100	0100	Arizona Desert	Phoenix, AZ	28445	THU	1930	1930	Speedway	Rainier, OR	28350
			10-10 Net			FRI	0001	0100	Fort McHenry/	Arbutus, MD	28370
MON	0100	0200	Milwaukee	Milwaukee, WI	28365				Cornerstone/Yodar Kritch		
MON	0100	0100	Lonestar	Arlington, TX	28460	FRI	0300	0400	Chief Seattle	Seattle, WA	28430
MON	0130	0230	Bauxite	Benton, AR	28470	FRI	1400	1400	New Waterkant	Boern, DL	28355
MON	1630	1730	Chief Seattle	Seattle, WA	28430	FRI	2230	2130	Down Under	Aukland, ZL	28530
MON	2330	2330	Sky BI Wtr/	Inver Grove	28380				(Summer in NZ is winter in US)		
			Tn Lzz/Twn Ct	Heights, MN		SAT	0300	0400	Chief Seattle	Seattle, WA	28430
TUE	0001	0100	Ft McHenry/	Arbutus, MD	28370	SAT	1430	1530	Steamboat Plus	Shreveport, LA	28430
			Cornerstone/Yodar Kritch			SAT	1400	1400	Hanse	Hamburg, DL	28355
TUE	0100	0200	CO Centennial/	Lakewood, CO	28340	SAT	1510	1610	Louisiana Pelican	Livingston, LA	28450
			CO Frontier Gang						10-10 Net		
TUE	0100	0200	City of Lights	St Charles, IL	28150 CW	SAT	1600	1700	City of Roses/	Ridgefield, WA	28835
TUE	0130	0230	City of Lights	St Charles, IL	28720				Portland Bridges		
TUE	0130	0230	Bauxite	Benton, AR	28470	SAT	1730	1730	Tango	Buenos Aires, LU	28650
TUE	0300	0400	Bay Area	Hayward, CA	28475	SAT	2000	2000	Restoration Project/	Port Alberni, BC	28750
TUE	0430	0430	Aloha	Hilo, HI	28490				Feline Friends		
TUE	1500	1600	New Mexico	Albuquerque, NM	28835	SAT	2200	2200	Alii	Lihue, HI	28730
			Mud Ducks								
T/W	2330	0030	Minuteman/	Saugus, MA	28409						
			Old Ironsides								
WED	0001	0100	Castle Craig	Meriden, CT	28375						
WED	0001	0100	Cincinnati Area	Milan, IN	28800						
			Ten Tuners								

** Indicates a change since the last published list.

All changes to the above times and/or frequencies should be referred to the Chapter Coordinator if you desire your net information to be accurate. Chapter Coordinator: KA0ZPP, Jim Fox, PO Box 135, Mayhill, NM 8839-0135. E-mail: ka0zpp10ten@gmail.com.

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 last June, the Foundation Board voted to guarantee the funding for five \$2000 scholarships to be awarded in 2017. 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 Gerry Gross, WA6POZ, #21274 and Linda Gross, KA6SPS, # 69700 donated in memory of Marilyn Webb, WM2W, #76400 and Jack Moore, K5CC, #50708. 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 have an employer matching program, please let us know. This quarter an employer match was received for Taras Sochan, K2ERD, # 74082.

If you make a donation of \$15 or more you are eligible to receive the current year pin. For a donation of \$25 or more we can also send you one of the older 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 Page 31 or send your check to me or the Data Manager. Our addresses can be found on Page 30.

The members listed below became 10-10 Scholarship Foundation Supporters during the months of March, April and May and we appreciate their support.

Platinum (\$1000 or more)

N6JWH John Hays 75372

Gold (\$500 to \$999)

None

Silver (\$100 to \$499)

K0HWE.....	Al Hammond	03743
W7GSV.....	Robert Rosie	07673
W2IP.....	Paul Cornett	26513
N3FP.....	Fred Peters	47239
K4QYC.....	Joe Sport	51459
KB0EHC.....	Agnes Hammond	53967
KA6WBQ.....	Michael McMurtry	55378

Silver (\$100 to \$499) Continued

WB6OJB.....	Dr. Arnold Kalan	70675
W0IE.....	Henry Monton	71256
KE6GFI.....	Sheila Schwartz	72985
AA2MA.....	Mark Morgida	73000
*K2ERD.....	Taras Sochan	74082
N6SKM.....	Stephen McGrogan	77095

* Employer match received.

Bronze (Up to \$99)

W0VUB.....	Francis Hayes	00593
W0ALC.....	Curtis Gamble	09403
WA6POZ.....	Gerry Gross	21274
DL6DK.....	Peter Voits	39944
N8HSO.....	David Hendricks	45424
N0ROD.....	Gregory Hendrix	59378
KA6SPS.....	Linda Gross	69700
K8HEF.....	Richard Schwartz	69926
W6HST.....	Wilbert Harris	71857
W8FSF.....	Frederick Freer III	72789
N8NYI.....	Paul Andrews	73913
WB4MM.....	Michael Mason	76750
K17CSZ.....	Robert Wilson	77489

10-10 SCHOLARSHIP APPLICANT INFORMATION

Each year the 10-10 International Net, through our non-profit corporation, the 10-10 Scholarship Foundation, funds five \$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. The five most recent winners were featured in the Fall 2016 issue of the 10-10 News and on the 10-10 website. Over the past 29 years, 10-10 has funded 108 scholarships valued at \$127,000.

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 FAR's website: <http://www.farweb.org> or request an application from:

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

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 2017

AD4RX, Roger..... Director/Publications Manager
AJ7B, Randy..... Newsletter Editor
G4BLH, Mike Awards – GB
K0DBK, Brad Awards – Counties
K4QHH, Bob..... Award Manager-Mobile & VP
K5BKT, Peggy Committee Member
K5ERJ, Ed Committee Member
K6DNR, Bob..... Net Control
K6RDK, David Data/ Membership Manager
KA0ZPP, Jim..... Director/Chapter Coordinator
KA5VVD, Bob..... Committee Member
KC1BTA, Jason Scout Award Manager
KC8IM, Dan Net Control
KD5DE, Mel..... Past President
KD6FEC, Rex..... Scout Certificate Manager
KE1HG, Charles Committee Member
KI6OY, Lee Awards – CW
KM5EH, Marcus Director/Awards Manager
KM5FF, Eddie Awards – WPX
KQ4PK, Robert..... Net Control
KR7RK, Keith Treasurer
KZ3T, Dan..... QSO Party & Awards Manager
N0KDB, Ruth SK Manager
N0TW, Terry..... President
N5MT, Mike..... Awards – DX

N6ELK, Louise..... Net Control
N6OPR, Bob..... Director/Net Manager
N7YG, Jeff IT Manager
N9AC, Gerald W6OI Trustee
NP2MR, David..... Committee Member
NZ1I, Kevin..... Secretary, Awards WAC
VE7SSJ, Garry Committee Member
VE3MEW, Bill Committee Member
W3WIE, Tony..... Awards – 1000+ Bars
W4MAA, Bobby Committee Member
W5DJT, David..... Committee Member
W9HT, Joshua Vice President
WA2SUH, Larry Scholarship Manager
WA3GM, Greg Director
WB0CON, Eva..... Awards – WAS
WB6OJB, Arnold..... Net Control
WB9WZI, Alan Net Control
WI9X, Jim QSL Bureau Manager
WM2W, Marilyn* Awards – 1000+ Bars
WN4AMO, Paul Director/Publicity

* Silent Key

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

CW Corner

This edition of CW Corner may well be more condensed than I had originally hoped, but projects here in the shack are stacking up and going a bit slower than I had hoped. I've been having my share of antenna issues, of which revolves around the use of an Antron 99 CB Antenna that I had been using, tuned for 10 meters. SWR changes have had me concerned, so I am in the midst of homebrewing something and simply going through the tuner. It is my hope to be heating up the electrons here in another week or two, all while

hoping that the Spring Sporadic E Season holds out long enough for me to encourage some activity on the bottom end of 10 meters. Should it not, I'll grace 20, 30 and 40 meters with my presence, in efforts to wrap up my Senator award for the Straight Key Century Club (SKCC). This is another project that is long overdue in its completion, as I achieved the Tribune Award back in 2009, if memory serves me correctly. My hope was to finish my Senator Award on 10 meters, but it seems that the current state of propagation has other ideas.

I also have a couple other projects going here in the shack via the computer. One of them is entering the data from our previous 10-10 CW QSO Parties

into a Microsoft Access Database. My hope there is hopefully to correlate that information to past solar cycles, and to use that data as a benchmark for upcoming events. I had been pondering doing that for quite some time, but it was a nice note from Van, N4ERM, 10X #34524, that encouraged me to get it started. Be advised however, my friends, that this project will only further my push for everybody to utilize the bottom 300 kHz of our beloved 10 meters to hone your cw skills, no matter how proficient. The explosive growth of SKCC has taught me that there is, in fact, a desire for new hams to develop their cw skills, and those who have been around a while but may have let their fist get rusty to blow off the cobwebs.

I have also been thinking a good deal lately about other things that we in 10-10 could participate in, all while promoting use of the band. Several things come to mind here, including digital communications, such as PSK 31, JT 9, JT 65, and other modes such as SSTV, AM and FM.

I ran some PSK 31 about 10 years ago, and it was a good deal of fun, but I began having issues with my interface to the computer and I never could figure out just what the problem was. It worked fine on cw, but it simply would not key the rig through the mic port. Perhaps I will replace it at some point; perhaps I won't- I'll decide that this fall when money and time issues are a little bit better. The propagation sites online such as dxmaps.com and the Reverse Beacon Network suggest that a fair amount of our propagation has been coming from these modes.

Thoughts of Emergency Services on 10 meters have also been on my mind, but I am currently at a loss as to how this would be implemented. All such traffic tends to gravitate to 2 meters, and we simply do not have the volume of people necessary for the local traffic handling.

While I seem to be a prophet of doom and gloom on this topic (and I use that term loosely), I do wish to offer some encouragement to those of you who have an interest in cw and advancing the cause of 10-10 to bring them together. It'll give each of you personally the chance to enhance your operating skill and help promote 10-10 at the same time. My suggestions are simply to align forces with organizations such as SKCC and FISTS – groups that at their core exist to advance the use of cw, and combine that in essence with 10-10. I have found members of both clubs to be very patient with those who are new to cw, and they would love to have welcome new people to their fellowship. As you can see, this is not to suggest that these organizations merge, but simply combine forces for a common goal – in this case, furthering the use of cw on 10 Meters.

By the time our Fall 2017 edition goes to press, it is my hope to have the other couple of projects here in the shack either wrapped up or at least a good bit closer to that goal, and maybe then I'll have better news to report!

73, Jim Stoeber, w19x (#49635)

Revisiting a 10 and 6 Meter Mobile Antenna

Get ready for better propagation on the higher frequencies with this two bander.

Charles Rankin, WA2HMM

Almost 40 years ago, Greg Gentile, WB2FXO, and I were light in body and heavy in hair. Now, nature has reversed that – but some things do stay the same. One such phenomenon – 10 meters is still an indicator for things to come on 6 meters. In any case, 10 and 6 meters remain fun places to play radio.

In this age of surface mount devices, it is a serious challenge for the average ham to be able to homebrew his toys, especially transmitters and receivers. Most amateurs are limited in electronic construction projects or accessories, more and more of which are now built into radios. That tends to limit many kinds of useful projects.

That is not the case, however, for an antenna. We all need antennas all the times., We can still build an antenna – wire, aluminum and steel are still the same. Normal hand tools can typically construct most antennas we want to build.

ADDING 6 METERS TO YOUR MOBILE STATION

Most modern transceivers now include 6 meters as the upper band. Ten and 6 meter mobile operation is not just something that would be nice to have, but is readily available for most mobile operators. But that extra antenna on the family vehicle is something that must often be negotiated with family members – the first one wasn't so hard was it?

A Two Band Whip

Now we let's go back 40 years and take a second look at a QST article I wrote describing a dual band mobile whip. Let's take a look at what we needed then, and still do, to make an antenna that you can build for operation on both 10 and 6 meters.

Most of us can get our hands on an old CB whip antenna (full size, stainless steel 9 footer), some solid copper wire (#12 or 14 AWG), some stainless 10-32 hardware and a 10 pF capacitor. Some other miscellaneous materials might include a waterproof coating for the coil and a 5-inch spring. The configuration is shown in Figure 1.

Setting the Trap

The basic concept of this antenna is the fact that a parallel tuned circuit yields very high series impedance at resonance, and much lower impedance far off resonance. So if we place this parallel tuned circuit, or trap, in an antenna, we can divide that antenna into segments that support multiple bands of operation. On 6 meters, the trap acts as an insulator, so just the bottom section acts as an

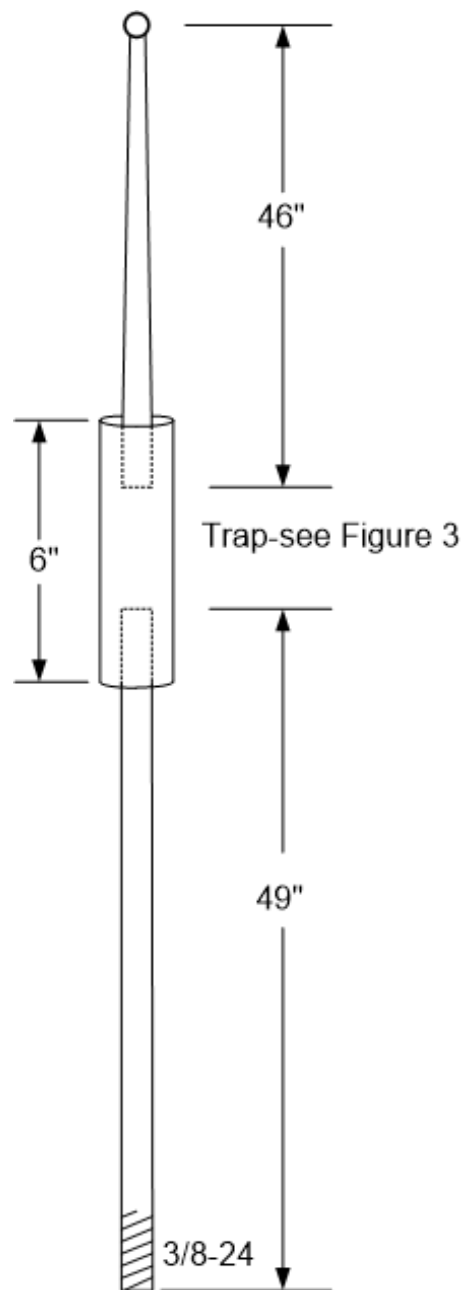
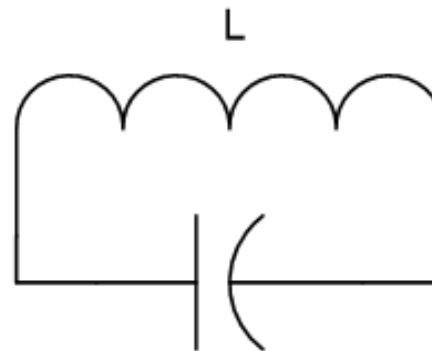


Figure 1. Dual band whip configuration

antenna, On 10 meters, the trap acts as a small loading inductor, reducing the total length needed compared to the usual $\frac{1}{4}$ wave radiator.

Details of the trap assembly are shown in Figures 2 and 3. As I stated in my earlier article, this is only one way of doing the job. Dimensions are not critical, unless you are interested in duplicating this design. The coil form, wire and capacitor can all be changed, as long as you tune it to resonance for 6 meters. Set resonance to the center of the frequency range on 6 meters you plan on working; back then we used a grid dip meter. Now an antenna analyzer could be used. Your SWR measurements should be similar to mine shown in Figure 4.



Capacitor is 10 pF, 1 kV dipped mica radial lead. P/N Digi-Key CD19CF100JO3F-ND.

Figure 2. Trap Schematic

Whip Fabrication

The whip is cut into two sections – the bottom section to 49 inches (44 inches if you use a 5 inch spring), the top section to 46 inches. The ends are then deburred. These lengths could vary slightly, as final adjustment of the trap can compensate for some minor differences in materials and the position of the antenna on your vehicle. Drill the 2 holes for the whip sections in the coil form to a depth of 2 inches.

I suggest that you use a small half round metal file to make small indentations in the whip at the locations of the screws that attach the coil form. This will help prevent slipping. The trap on the new 10 and 6 meter mobile whip is built on a polycarbonate form using tin plated #10 AWG wire and stainless steel 10-32 cap screws. After adjustment, the trap is coated with a black liquid rubber insulation. The antenna is fed with 50 Ω coax. Remember: The coax and the capacitor must be capable of handling the power you plan to run. The usual whip includes mail 3/8 – 24 threads designed to fit into a standard ball mount. The antenna has sufficient wind resistance that a heavy duty mount should be used. A single magnet type mount is not likely to stay in place at highway speed or if foliage is encountered.

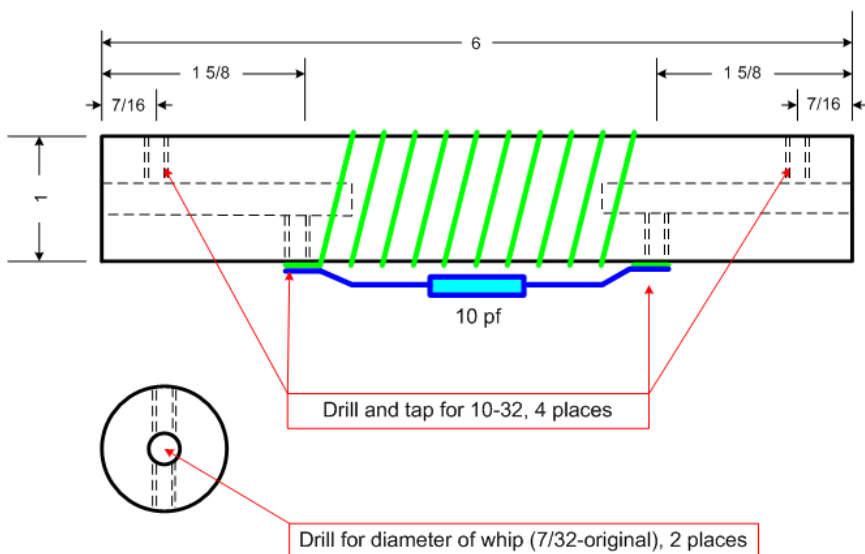
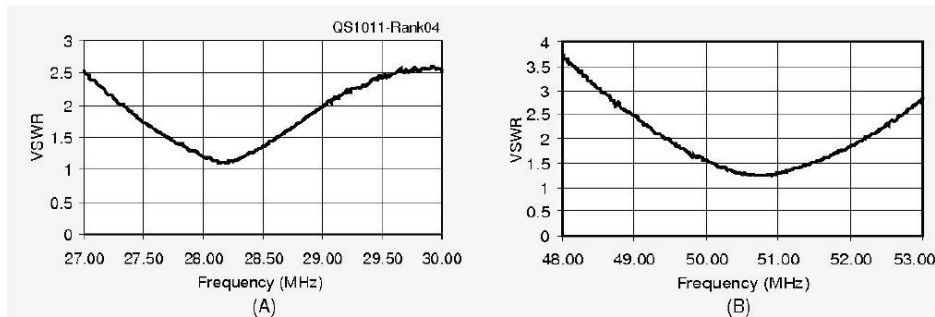


Figure 3. Trap construction.

ANTENNA PERFORMANCE

As mentioned in the earlier article, the effectiveness of this dual band setup is similar to that of separate whips for each band. The evaluation that Greg, WB2FXO, and I performed 40 years back used Greg's 10/6 meter receiver and S-meter for comparisons. Today I have access to better test equipment, a vector network analyzer and a spectrum analyzer, but an antenna analyzer will do the job.



Relative gain measurements were taken using the spectrum analyzer attached to a separate dipole for each band. The dipole was located 50 feet away. Comparing full size single band whips to the dual bander indicated a reduction of 0.74 dB on 10 meters and 0.47 dB on 6 meters – not bad considering an S-unit is defined as 6 dB.

Published with permission of the ARRL. Copyright ARRL.

The V-Yagi

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 May, 1998, QST, NW3Z and WA3FET published an interesting 3-element beam for 40 meters, using one tubular element and two wire elements. The result was a light weight (for that band) beam with excellent SWR and F-B characteristics. It superficially resembled an old design by Dick Bird, G4ZU, but had been optimized for performance resembling that of a Moxon rectangle: great F-B ratio, wide pattern forward, and direct coax feed. However, with an extra element, it had more gain. Why not adapt the design to 10 meter?

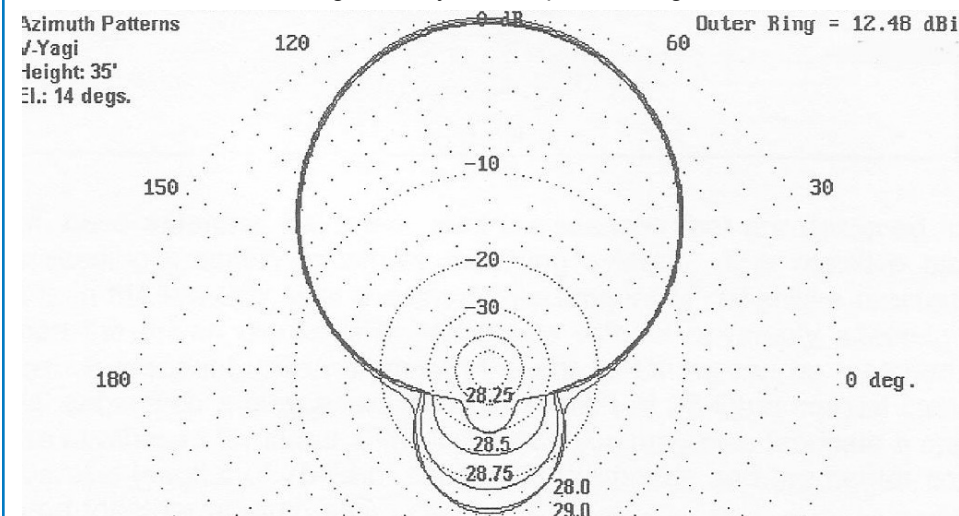


Figure 1. Radiation Pattern for V-Yagi

As Figure 1 shows, the adapted antenna for 10 meters has decent gain and good front-to-back ratio across the first MHz of the band. The patterns are taken with the antenna modeled at 35' (1λ) up.

The SWR curve in Figure 2 strongly suggests that direct coax feed is certainly in order. As always, I recommend a choke balun at the feedpoint.

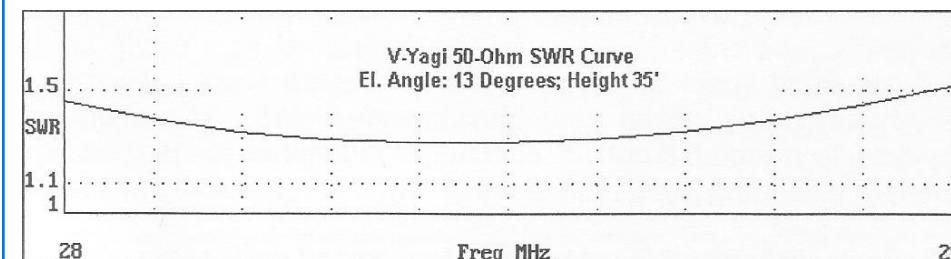


Figure 2. SWR Measurements

Now that we have seen what the antenna can do, all we need to know is what the antenna looks like and how hard it might be to build. Like all Yagis, it will have significant side-to-side and front-to-back dimension. However, unlike the usual Yagis, only one of the elements will be made from aluminum tubing, while the other two will be made from #14 AWG copper wire.

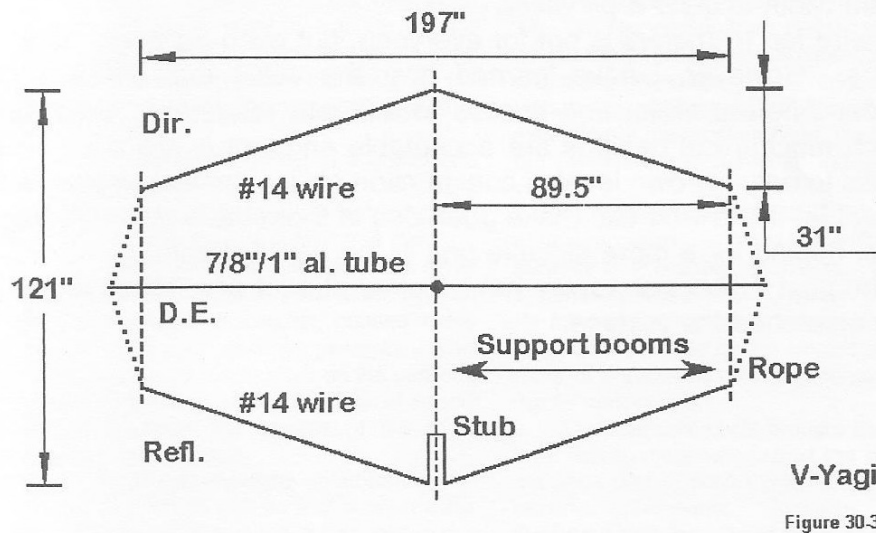


Figure 3. V-Yagi Construction Specifications

As the sketch in Figure 3 shows, the driven element is the longest part of the antenna. Overall, it is 197" long, with an insulated mounting plate to permit direct connection of the feedline to the element. The inner parts of the element are 48" lengths of 1" diameter hardware store aluminum, while the outer ends are made from 7/8" diameter tubing from the same source.

The dashed lines crossing the driven element are booms to support the wire elements. They can be made from fiberglass or aluminum, with the center boom stronger, since it is about 12' long. The end support booms can be lighter, but need to support the wire ends. If the end booms are made from aluminum, they should be insulated from the driven element and set farther outward, so that the wire elements can terminate at an insulator. Simple UV resistance rope (3/16" diameter) connects the wire and end-support boom to the driven element ends, which helps prevent the wires from loading the end supports too much.

The wires are each 94.4" long from the center boom to the end (at an insulator or at the support boom). At the ends, they should be between 30 and 31 inches from the driver. Since both wires are the same length, we need to load one of them to electrically lengthen it to become a reflector. A shorted transmission line stub about 65.55" long will do the job, although you may want to adjust the

exact length when tuning up the antenna. The length in degrees translates into 50.125" of RG-58/RG-8 (velocity factor 0.66) line. You can use standard stub equations to calculate the length of 300-Ohm or 450-Ohm line as a substitute.

The V-Yagi will not give all of the gain that a 12' boom is capable of giving if the elements were linear and fatter. In fact, this antenna is about 1 dB shy of maximum gain for the boom length. On the plus side of the ledger, the antenna is quite light, sturdy, and has a smaller turn radius, since the corners are shortened by the slope of the director and reflector wires. A TV rotator should turn the beam with ease. However, you may not have to turn this beam as often as you might have to turn a standard Yagi, since the beam width is quite a bit wider.

The V-wire for 10 meters is not for everyone, not even for every addict of home brew antennas. However, I have learned over the years that different folks have different needs, different skills, and access to different materials. So I never try to prejudge which mechanical designs are acceptable and which are not. That attitude would limit folks to only my own level of construction ability. Instead, I pass along ideas for designs, and let those who can make good use of them have at it. Others can pass up this design, hoping for a more suitable one in the next column.

Over the past 7 years or so, we have looked at a lot of antenna ideas. And yet, we have only scratched the surface.

ARTICLES

There is always a need for articles in the News. There have been a couple requests for Do-It-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.



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 - www.ten-ten.org

TOP TEN HONOR ROLL

No.	CONTACTS	CALL	10-10#
1.	24600	WA5JDU	3017
2.	11700	K0PV	9902
3.	11700	N5XZ	4530
4.	11200	DL8YBM	36109
5.	10500	N1API	25468
6.	10000	K6PZE	1341
7.	9800	N5DAS	35877
8.	8800	AC6FU	10937
9.	8200	K5FBS	48461
10.	8100	WB3FGU	16728

TOP TEN CLUB

No.	CONTACTS	CALL	10-10#
1.	10100	WD0SFT	37933
2.	4400	K6MQ	K6MQ
3.	3300	DL0X	DL0X
4.	2100	W8PGW	W8PGW
5.	1800	W1NRG	W1NRG
6.	1200	NM5MD	NM5MD
7.	1100	W4MNM	W4MNM

COUNTRIES AWARDS

BASIC AWARD

NO.	CALL	10-10#
541	VK5PAS	76564

AWARDS MANAGERS

BAR 100-900..	Dan Morris, KZ3T #41015	3162 Covington Way, Lenoir NC 28645	(828) 728-5049	dbmorris315@gmail.com
Bar 1000+ . . .	Tony Lisnak, N2WIE, #66790	192 Greenvale Ave, Yonkers, NE 10703	(914) 476-4032	lisnak@optonline.net
VP Bar	Bob Bishchoff K4QHH #26040	180 Persimmon, Rutherfordton, NC 28139-9319	(000) 000-0000	rabisch@hotmail.com
VP WAS.	Bob Bishchoff K4QHH #26040	180 Persimmon, Rutherfordton, NC 28139-9319	(000) 000-0000	rabisch@hotmail.com
VP Lucky 13 . .	Dan Morris KZ3T #41015	3162 Covington Way, Lenoir NC 28645	(828) 728-5049	dbmorris315@gmail.com
WAC	Kevin Gilot, NZ1I, #72759	50 Cindy Lane Mystic, CT 06355-1404	(860) 572-6086	kevinemt1d@tvconnect.net
Counties	Brad Kimble, K0DBK #55192	3855 66th St. E., Inver Grove Hts, MN 55076-2222	(651) 755-9192	kzerodbk@gmail.com
Countries	Mike Davidson, N5MT #24949	3518 Bellefontaine St. Houston, TX 77025-1310	(713) 668-8408	N5MT@aol.com
CW.	Lee Zalaznik, KI6OY #50948	334 Olivina Ave., Livermore, CA 94551-6137	(925) 455-0361	lee.zalaznik@sbcglobal.net
Digital.	Mel Sojka, KD5DE #33513	353 Atlantic Ave., Shreveport, LA 71105-2909	(318) 861-7012	kd5de@nwla.com
Mobile	Bob Bishchoff K4QHH #26040	180 Persimmon, Rutherfordton, NC 28139-9319	(000) 000-0000	rabisch@hotmail.com
OM/XYL.	Marcus Lieberman, KM5EH #71103	2300 Hurley Drive NW, Albuquerque, NM 87120-1013	(505) 836-1724	buckml@lobo.net
WAS	Eva Donaldson, WB0CON #53964	12933 W Montana Drive, Lakewood, CO 80228-4244	(303) 989-0475	wb0con@comcast.net
WPX	Ed Bryant, KM5FF, #50356	9001 Sunbow Ave SW, Albuquerque, NM 87121-8851	(505) 934-2100	elbble@gmail.com
GB Counties . .	Mike Crawshaw, G4BLH #18446	Moved - New address coming	No Phone	g4blh@zen.co.uk
Scouts	Rex Landreth, KD6FEC #77131	30 Alida Road, Braintree, MA 02184	No Phone	kd6fec@gmail.com

Fraudulent Awards Application

Recently there has been a fraudulent application submitted for one of the 10-10 awards. I must caution members this action will not be tolerated and offenders run the risk of being banned from submitting award applications for a period of 5 years.

Ten-Ten operates on the honor system and cheating is not permitted.

Terry N0TW #36547

When Should I Use a Vertical on 10?

Most of the antennas we have discussed in this column have been horizontally polarized. There are some good reasons for this fact. First, 10-meter horizontal antennas are fairly compact, with a half wavelength being about 16-17' long. Second, the shortness of a wavelength on 10 meters (35') generally simplifies the process of supporting a horizontal 10-meter antenna at a good height (at least $\frac{1}{2}$ wavelength, with over 1 wavelength preferred for best performance). Third, even 3-element 10-meter Yagis are fairly light-weight, for easy support, even in field or hilltop operations.

Nevertheless, there are some good reasons for using a vertically polarized antenna on 10. Although the gain of such antennas may not usually compete with a well-installed horizontal antenna of the same size, this factor is rarely a problem when the band is open. So let's look at the question of when to use a vertical.

1. Mobile in Motion: The standard these days for mobile-to-motion operation is the short, center-loaded, magnetic mount vertical set on the car roof. Although the least efficient of almost any antenna used on 10, these antennas acquit themselves well. Full size $\frac{1}{4}$ wavelength whips have gone out of vogue, especially with the increased use of plastics in autos. When auto bodies themselves become universally plastic or fiberglass, we may have to rethink the center-loaded mag-mount vertical for mobile operation.

2. Lunch-Time Operation: With small rigs, short antennas, and an open band around noon, 10-meters lunchers are more numerous than we imagine. Since the lunch hour (or half-hour) is all too brief, operators want a system that wastes no time in set-up and take-down. The vertical—again, usually a mag-mount antenna in the parking lot—fills the bill.

3. Local Convention: In some towns and cities, most of the locals may use vertical antennas. Sometimes, this represents a lot of mobile work; sometimes it represents former citizen's band operators who have joined the amateur ranks and cut down their old antennas to resonate on the higher frequencies. Since local work is mostly point-to-point, as in VHF operation, cross-polarized antennas result in major losses in signal strength. So if the local group is mostly

vertical, then it will pay you to have a vertical at home (as well as on the car) to join the fun full strength.

Since the path through the ionosphere generally skews signal polarization, distant stations will not suffer from being cross polarized relative to your antenna.

4. Lack of Space: Many hams live in homes without large yards. So space for antennas must compete for space with play equipment, patio furniture, and flower gardens. A vertical may be the only antenna type the home owner can erect.

The question here is not whether to use a vertical, but what kind of vertical to use. There are a number of multi-band verticals now on the market that will open many of the ham bands. They come in two major types.

If the roof top is the mounting area of choice, then one of the $\frac{1}{4}$ wavelength trap vertical may be best. The heaviest part of the antenna is mounted near the roof top or chimney mounting system for maximum support. The necessary radials, installed according to the antenna maker's instructions, can run along the roof top. If the antenna is at the end of the house, radials in the open direction can be run to trees or fence post, well out of reach of children or adults.

Where space is too restricted for an elevated radial system, one of the half-wavelength verticals may be more fitting. Some demand an elevated mounting point and may rest well on top of a fence post, short flag pole, or even a mast attached to a deck post. Other models call for ground mounting and can be placed in the most clear usable place in the yard with buried coax.

In all such installations, safety to children, family members, visitors, and neighbors is a top requirement. These antennas are rarely large enough to cause damage to neighboring property if they fall. Of course, they should be well clear of any utility lines crossing the yard. Finally, they should be isolated so that no one can get an RF burn by touching the antenna while in use. For some models, we achieve this last safety measure by elevating the antenna above reach, even by fence-climbers. Ground-mounted models require some extra thought. Setting up a flower bed and small fence around the antenna can keep most folks away. Sheathing the lower portion of the antenna in large-diameter black plastic down-spout drainage pipe for about 8' up is quite effective in preventing children from touching the antenna and has been found not to adversely affect performance. The protective sheath can be attractively painted (with non-metallic paint) to call attention away from the antenna. Whatever the safety measures we take, we would also insure that they meet FCC requirements regarding RF exposure to other people.

Even hams with room for a host of horizontally polarized antennas may wish to consider installing one of these multiband verticals. They make good (even if not great) low-band antennas, provide back-up service in case the main beams collapse in high winds or ice, and allow the operator to match the polarization of locals using mobile whips or other vertical antennas. So even if you can afford

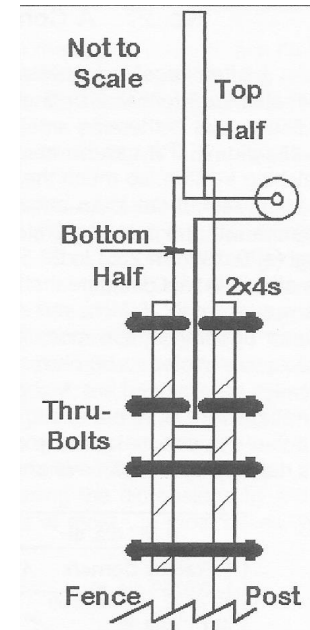
the highest, the biggest, and the best, one of these simpler antennas makes good sense as part of the antenna farm.

5. Home Brewers: Some of us like to build antennas. Some of us have to build antennas to save the cost of commercial versions. Whatever the reason, a vertical dipole for mounting at least 20 to 25 feet up at the center on a non-conducting mast is a good starter project. I suggest a vertical dipole, since it saves a lot of grief over where to run the radials for a quarter-wavelength ground-plane model. The vertical dipole also takes less space than a horizontal dipole and requires no turning for maximum signal.

You can construct a vertical dipole from hardware store materials: aluminum rod or tubing (a little over 8'), PVC, and wood are the main ingredients. Figure 1 shows in bare outline a vertical dipole I once used to capture Worked All Continents in about an hour at the height of a long-ago sunspot cycle. The 4x4 fencepost was the main support, with underground bracing from bagged concrete. The side rail 10' 2x4s supported a good quality 2x4 mast, with the 4" side running between the rails. Two long galvanized bolts braced the mast. Removing the lower bolt permitted tilt-over operation.

The antenna itself began with an 8' length of aluminum tubing for the top extension. The lower part of the antenna consisted of insulated #12 house wire, purposely cut long. I tuned the antenna to frequency by trimming the lower wire for minimum SWR. Many local hams seemed initially horrified by the idea of a dipole made from unequal diameter elements and trimming only on end. They thought that terrible things would happen to performance, since the antenna was obviously as unbalanced as its builder.

Actually, virtually nothing happens except for a bit of building and adjusting convenience. Half-wavelength antennas lose nothing in performance by being fed slightly (or even radically) off-center. The feedpoint impedance does not begin to change noticeably until the feedpoint is well off center. The only precaution was for safety: the dipole end is a high-voltage point on the antenna, so it had to be inaccessible to human touch when in operation.



There you have it: some good reasons for using vertical antennas on 10 meters, whether they are commercial multi-band antennas or home brew specials. There are other reasons of a specialized nature that we could add. For example, if you live by the seaside, expect an exceptional increase in performance over the same antenna placed on a rocky hillside in the Smoky Mountains. Verticals have proven to be more than good enough in some island contesting locations. Some operators even prefer the wider beam width of a vertically oriented Yagi to one that is horizontal. Whatever the reasons, verticals have and will always have an important place in 10-meter operation, even if we never mention FM and repeaters at all (which I just did).

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.

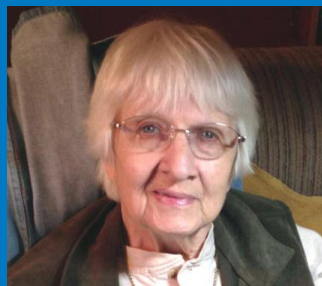
LOYAL..... offering loyalty, encouragement and support to other amateurs, local clubs and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

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.



Silent Keys

Ruth Bartholomew, N0KDB
#48715

It is with sorrow that we note the following Ten-Ten members who are now Silent Keys. We extend our sincere condolences to the families and friends of those SK members whose calls and Ten-Ten numbers will forever be kept in the records of the Ten-Ten Net.

10-10#	Call	Name - City, State
211	W4EBI	Ralph W Sudberry - Brentwood, TN
481	NE8I	Lloyd J Ellsworth - Farwell, MI
2380	K2KYR	Ronald J Casagrande - Windham, NH
2515	WA4QXC	Lee Wilkinson - Maryville, TN
2853	W6KJ	Ronald D Murdock - Yuba City, CA
2908	WA5POL	Al H Rader - Albuquerque, NM
3411	WM0Z	Warren E Holland - Durango, CO
3826	K4SQR	James R Miller - Charlotte, NC
3874	WA8UNP	John Anderson Jr - Sebring, FL
4788	W4KL	Randolph E Watkins Jr - Evans, GA
5442	N9LR	Lawrence A Reiser - Dunlap, IL
7169	WA9BXX	Richard B Breckinridge - Brookfield, IL
7936	W6PQH	Harvey L Cresey - Long Beach, CA
8107	K0KCH	Ralph R Look - Wichita, KS
8204	N5FG	R Floyd Gerald - Wiggins, MS
8350	WA4GAR	John F Sheffield - Bradenton, FL
9382	W8YO	Kenneth M Spahr II - Tawas City, MI
10927	W7CB	Larry K Miller - Templeton, CA
10982	N6FB	William A Hartman - W Palm Beach, FL
11783	K5JHP	William E Pierrard - Houston, TX
13759	K1SU	Frederick Maseizik - Oxford, CT
13967	WB0MSU	Francis D Thavenet - Tulsa, OK
15016	W5PJR	Dean W Showalter - Tijeras, NM
15336	K1UBB	Willis C Kellogg - Concord, MA
15494	N7AEB	Albert E Bacon - Tacoma, WA
16341	W4WLD	John H Vinson - Athens, AL
16382	KY4R	James C Robeson - Talbott, TN
16464	KN4HT	Murray D Ball I - Charlotte, NC
17150	W5TLV	Francis 'Frank' Cooper - Durant, OK
17260	W5WMU	Patrick A Sonnier - Lafayette, LA
17378	WA6HNQ	Clarence 'Clancy' E Smith - Garden Grove, CA
17886	W1DWA	Donald N Davis - Pittsfield, MA
18496	K9QWJ	James G Vogt Jr - Jeffersonville, IN
18761	K4ANL	Wayne J Shope - Charlotte, NC
18895	W5RLM	Randall L Moody - Allen, TX
19368	W7DJX	Ralph M Griffin - Portland, OR

10-10#	Call	Name - City, State
20516	WA1AWR	John J Paganelli - Milford, MA
21546	WA2LTT	Joseph D Milora - Barnegat, NJ
21624	N4AYI	Ted L Williams Sr - Oneonta, AL
22534	K0SQ	Charles J Munce - Brooklyn Park, MN
22773	W5VXU	M 'Mike' K Schenkel - Hobart, OK
24217	N9CEE	Gilbert R Malkowsky - Oshkosh, WI
24424	W7CD	Robert L Farnworth - Bellevue, WA
24432	W5JH	Jerry W Haigwood - Diana, TX
25382	WB8WWK	John W Lane - Lake Placid, FL
25738	KG3Q	Louis De Angelo - Reading, PA
26260	W4SWB	Thomas D Miller - Burlington, NC
26797	W4DJL	David J Landau - Birmingham, AL
27204	DL7OK	Dietmar Knorr - Oberhausen, GER
27782	K7FE	Terry L Graves - Thousand Oaks, CA
28023	KB9HQ	Robert D Hutton - Dix, IL
28096	K9VXH	Homer Evans Jr - Portland, IN
30065	KC7JC	Douglas J Rider - Spokane Valley, WA
30716	W0ZQJ	Kenneth W Covey - Moorhead, MN
30876	N2SAC	John L Bristol III - Peekskill, NY
31308	K1ILZ	Lawrence F Smith - Hampden, MA
32273	W2JUA	John R Van Son - Southlake, TX
32879	KC8HJ	Alex M Toth - Fremont, OH
33340	WB2MEW	Seymour 'Sy' Saslow - Saratoga Springs, NY
33346	W2RMY	Charles 'Chuck' Oliver - Cape May, NJ
34034	KA8HED	Rebecca J Young - Circleville, OH
34874	N2NER	Richard A Rehberg - Binghamton, NY
35101	K9KYJ	Bruce A Raney - Wauconda, IL
36447	N4IVT	Wallace J Ruppe - Rutherfordton, NC
36525	W8NPH	Alio J Benedetti - Highland Heights, OH
36879	W0OYH	Orlan Q Cook - Shawnee Mission, KS
37174	W1WAC	Gilbert A Slater Sr - Pawtucket, RI
37711	KF4CJ	James E Dawson - Bryant, AL
38723	K1ON	Lawrence Scarpa Jr - Barton, VT
38773	NO2V	George F Mitzel - Lords Valley, PA
39800	W9JNS	Ralph F Duy - Aurora, IL
40419	KZ1J	Joseph J Vicere III - Lincoln, VT
41152	N4LLD	Hugh W Quigley - Bradenton, FL
41798	W1ALS	Adolph B Mattson - Milo, ME
41818	W4KSV	Lawrence W Falwell - Lynchburg, VA
41845	K4VX	Griffith L Gordon - Hannibal, MO
42053	DJ8EF	Dr Ferenc G Kiss - Edelsberg, GER
42476	W3GIL	Gil R Downing - Salisbury, MD
43924	K2KIB	James A Petroski - Piscataway, NJ
44024	N8OR	John C Talboys - Boyne City, MI
44122	N3FZP	Sonny Z Postles - Dover, DE
44327	NOGRG	Don E Rixon - Lawrence, KS
44789	WB4TBF	William H Cox - Mauldin, SC

10-10#	Call	Name - City, State
44961	N7ELW	John M Boone Sr - Newport, WA
45480	KB8CXV	Robert F Ausnehmer - Aiken, SC
45959	W3UAQ	John J Antonio - Wellsboro, PA
46697	K1APM	William L Wilkins - Marblehead, MA
49873	N8JOQ	Richard F Pletcher - Mentor, OH
50028	KA1SIT	Neil R Ostiguy - Northfield, VT
50708	K5CC	Jack D Moore - Bulverde, TX
52325	WB3FQY	James E Bear - Manor, PA
52478	W1DMM	Daniel M Murphy - Durham, CT
52812	NZ8P	Marcus L Morlan - E Liverpool, OH
53405	N3GMR	Jimmy D Chapman - Meadville, PA
53453	N3DMI	Robert P Green - Morristown, TN
53789	VK3AKK	Ken W Jewell - Belmont, VIC, AUST
53899	KA2OMS	H. Stewart Coon - Webster, NY
54577	N2KKL	Pauline O Bateman - Waterville, NY
55215	W0SIG	Roy A Butler - St Peters, MO
56413	K6JLW	Thomas E St George - Oxnard, CA
56646	N8LLB	Carl H Brinkmeier - South Rockford, MI
57741	W8GZI	Jack W Ballard - Painesville, OH
59406	W2HIN	Robert T Lahullier Sr - Carlstadt, NJ
60854	KC4WPG	Rickey J Smith - Fayetteville, NC
61624	KA1WYT	Matthew E Robinson - Wilton, CT
61707	KF2CH	Donald M Bergreen - Olean, NY
62000	KH6DFW	Takeo Kuwada - Kailua Kona, HI
63155	WA6OCP	Neal C Enault - Sunnyvale, CA

63723	W7LXR	Russell V Fillinger - Portland, OR
64822	KG8MT	Richard V Rowe - Franklin, MI
65575	N2VEA	Edward Gunter - Kinton, NC
66856	KC7CRR	Robert D Lipp - Kennewick, WA
68574	WB8ZER	Bernard H Mays - Milton, WV
68927	G0GGT	Barry Hartley - Lancashire, ENG
69197	KC5RED/KC7S	George O Martin Jr - Adona, AR
70447	N2TH	Richard A Urban - N Arlington, NJ
70658	AB5YI	Rudolph J Pourciau Jr - Central, LA
71069	KA5VLQ	James B Phillips - Texarkana, AR
71298	NC4RS	Ronald E Stanley Sr - Greensboro, NC
71619	KF4UFW	Larry H Atchley - Knoxville, TN
71637	AB9LA	Thomas L Niemeyer - Crete, IL
72571	N7YU	David C Jones - Chandler, AZ
73541	W6SJ	Randy Johnson - Corona Del Mar, CA
73991	W9PTL	Lloyd 'Bud' A Noel - Galesburg, IL
74495	KF4MH	Harold W McDonald - Belleville, IL
74507	DG3LAR	Kurt Rusitschka - Kropp, GER
75589	WV9O	Marvin M Boetcher - Hobart, IN
76396	N3RWB	Richard W Brendlinger - Jamestown, RI
76400	WM2W	Marilyn J Webb - Monticello, FL
77052	K5SHO	Ralph E Shorts Sr - El Paso, TX

Thanks to Lee - K2HAT - #76138 for his efforts in helping me keep the sk column as up to date as possible.

Ruth 73/88, N0KDB #48715

TEN-TEN BOX

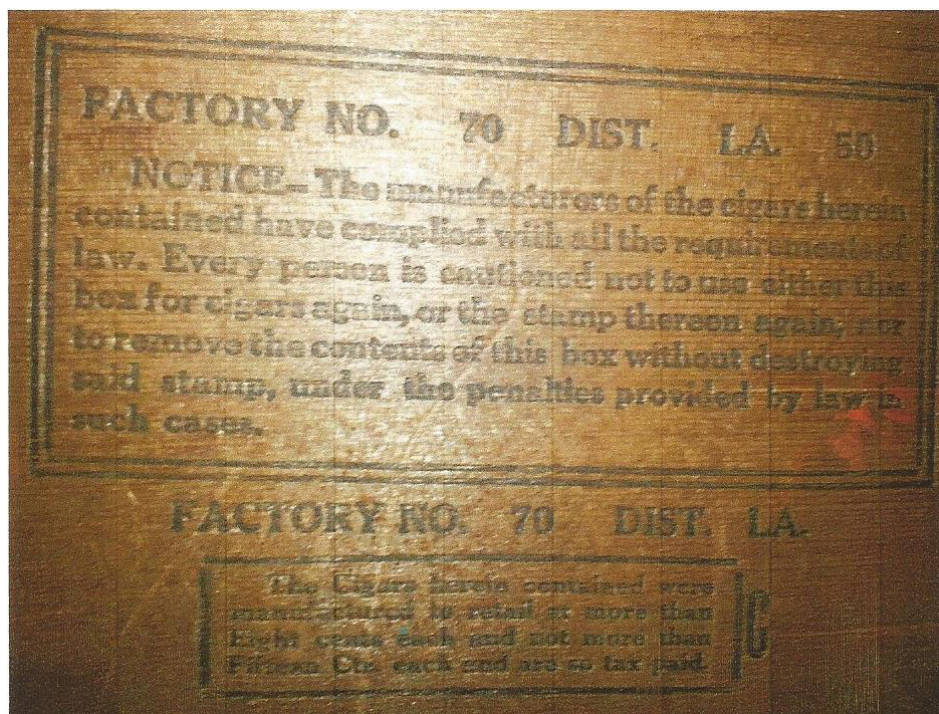
A few months ago I was at my close friend's house and we were going through some of his father's long lost back in the dusty depths of the corner treasurers in the attic.

As we were searching, this strange looking brown wooden box caught my eye. It was a "TEN-TEN" cigar wooden box from Louisiana Factory No. 70. He didn't know much about the box or even how old it was. So, I said hey, I'm a 10-10 member and I showed him my card. His eyes lit up and he said, "You gotta take a picture or few and send into the organization."

So here are the pictures for your interesting pleasure.

73, CJ K3UIP #66542





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 off 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 years. 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.ten-ten.org using the membership/update link.

All payments may be made by Check, Money Order or IRC's (\$1USD per IRC). 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 five \$2000 10-10 Scholarships that will be awarded next year. For donations of \$15 you will receive a current year's lapel pin as a thank you gift, and for \$25 or more a second pin from a previous year will be sent. To pay by credit card, see the payment information on page 31. 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.

Spirit of 76 - 7 day, 6 mode event around 4 July each year

0001 UTC Monday 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. NOTE: A QUIET ZONE between 28.490 and 28.510 shall be in effect during QSO Parties using the Phone portion of the 10 meter band to allow for others to use the band.

5.2.4 ENTRY CLASSIFICATION

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

INDIVIDUAL: Includes single station operators and can also include OM/XYL teams or any families or groups of people using individual call signs and 10-10 numbers.

QRP: same as an individual as listed above except that output power does not exceed 5 watts with CW/Digital operations and/or 10 watts with Phone operations during the entire 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. If a single transmitter becomes inoperable, it is permissible to change to a replacement transmitter.

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 and whose operating location is within 150 miles of the primary net location of that charter, may assign the entrant's score to that chapter. QSO Party scores for the Sprint may not be assigned.

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 ensure 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 15 days after the entry deadline, regardless of postmark, will be discarded. All logs may be sent via Email. Logs (if cabrillo, adif, or text) may also be uploaded at www.hamclubs.info/scorer/. Please no .Q95 files.

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 15 calendar days (this will always be a Monday) after the close of the event. Mailed entries for the Sprint (held on 10/10) shall be postmarked no later than October 25th, unless that day falls on a Sunday, then the postmark deadline shall be October 26th.

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, 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 1 0001 UTC to December 31 2359 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: 2010 is the 48th anniversary year of 10-10 International Net, Inc. Contact with members containing a "48" in their membership number (i.e., 72048, 69485, 64854, 48126, 00487) 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 15th 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 SPIRIT OF 76 (7 Days, 6 Modes) QSO PARTY

This event will run for 7 days and be around July 4th of each year. Make as many contacts as you can during the week using 6 modes. The modes that will be used are as follows as well as the suggested frequencies to monitor:

1. USB (28.345) 2. RTTY (28.086) 3. CW (28.050)
4. FM (29.600) 5. PSK (28.120) 6. AM (29.000)

Scoring will be as normal for QSO Parties, 2 points for members and 1 point for non-members. Dupes will be allowed once for each mode. It will be possible to work the same call 6 times in each of the various modes for a maximum total of 12 points per call. 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/VE9TEN/DL0X SPECIAL EVENT

This event is held during the 3rd weekend of November each year from 0001 UTC Saturday through 2359 UTC Sunday. This special event operation is where volunteers operate the 10-10 official club stations (W6OI/VE9TEN/DL0X) 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. DL0X is operated by Henry, DL8YBM. The purpose is to have fun promoting 10-meter activity making contacts with 10-10 members and of course, non-members. This is a great way to increase membership! Exchange is similar to any 10-10 party event - name, call, QTH, 10-10 number if one is available. As contacts are made, provide info on 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.

2017 10-10 QSO PARTY COVER SHEET

Event	Dates	Postmark	Event	Dates	Postmark
Winter Phone	Feb. 4-5	Feb. 20	Summer Phone	Aug. 5-6	Aug. 14
Spring Digital	April 29-30	May 15	Sprint	Oct. 10	Oct. 18
Spring CW	May 6-7	May 22	Fall CW	Oct. 21-22	Oct. 30
Open Season	June 3-4	June 19	Fall Digital	Nov. 11-12	Nov 20
Spirit Of 76	July 3-9	July 24	Anniversary (55)	Jan. 1 - Dec 31	Jan. 8
			Meet the Volunteers	Jan. 1 - Dec. 31	Jan. 8

Name _____ Call _____ 10-10# _____

Address _____

City _____ State/Province/Country _____ Zip _____

Your e-mail address (for contest questions only) _____

PLEASE LIST CONTEST EXCHANGE

Call _____ Name _____ 10-10# _____ QTH _____

ENTRY TYPE

- ☐ **INDIVIDUAL**
- ☐ **QRP** 10 watts or less Phone,
5 watts or less CW/ Digital
- ☐ **MOBILE** See QSO Party rules.
- ☐ **CLUB** Only for those operating
as a Club Station. If Operating under
a Club call, please list all operators and
their 10-10 numbers (if any) on the log.

**US Call Area (W0-W9)
Or ARRL DX Country
You operated from**

Chapter Assignment
(Not valid for Sprint)

Claimed Score

Contacts WITH
10-10 Number: _____ x2= _____

Contacts WITHOUT
10-10 Number: _____ x1= _____

Total
Contacts: _____ Total Pts _____

All submissions must contain this cover sheet (or a reasonable facsimile), the log in UTC Date/Time order,
And a Dupe Sheet (if more than 50 contacts) in call sign order or in grid format.

Mail to Dan Morris, KZ3T, 3162 Covington Way, Lenoir NC 28654, USA

**Logs may be emailed to tentencontest@ten-ten.org. Members are encouraged to upload logs at the KJ4IZW con-
test scoring web site: www.hamclubs.info/scorer.**