Northwest Indiana DX CLUB

Volume 8, Issue 4 April 2020

President's Corner

Hello everyone,

I hope all are well and not suffering from the virus. Great time to work radio.

Please be safe and stay well.

I have no idea when we will meet again, but it won't be until it is safe for us to do so.

73 John W3ML Good DXing!

INSIDE THIS ISSUE

- 1 President Speaks
- 2- Member News/DX News

NWI DX Club Website

http://nwidxclub.weebly.com/



Don't forget Steve is our new QSL Card Checker.

DXCC Card Checking is available by appointment and may be available at meetings. E-Mail kd9hl@arrl.net for an appointment or to make other arrangements.

Reminder, the NWIDX Club has a club call W9NWI.

The call is available to members for use during contests, special events, Field Day, etc. To schedule dates for its use, contact the trustee, Steve Mollman – KD9HL. kd9hl@arrl.net

QSL cards are available.

Notice:

Articles in the Northwest Indiana DX Club Newsletter (except for those separately copyrighted) may be reprinted, provided proper credit is given.

Handy Hint

Bending Resistor Leads to fit PC BoardsBy James W. Bennett-KA5DVS

When you first start building, you wonder why your attempts look so bad, and the master builders make it look so neat. The secret is to learn how they do things. I did it by asking. Jim Cates, WA6GER (SK) showed me a neat little trick a long time ago. You can use a circuit board as a bending gage for resistors if they use standard 0.4" spacing between the leads. It makes it look really nice, and every resistor will fit the board perfectly. It is easier to show you than tell you so let's get started.

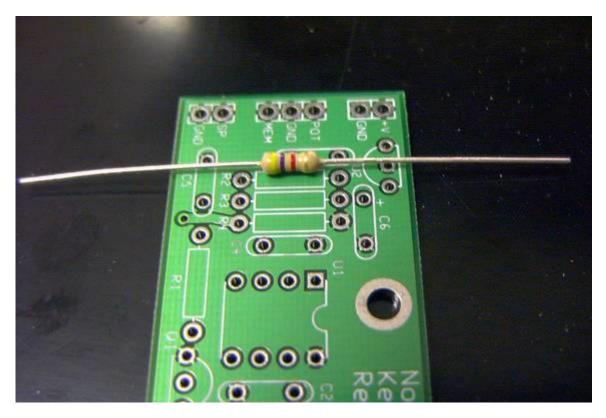


Fig. 1 - Resistor shown laying on board with 0.4" hole spacing.

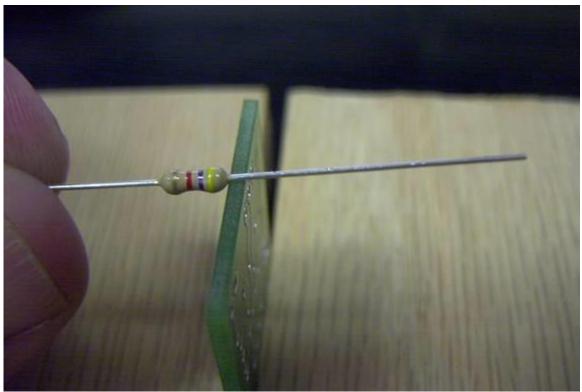


Fig. 2 - Resistor being held over the edge of the board prior to bending. Note that the edge of the resistor is right against the edge of the board. This is important.

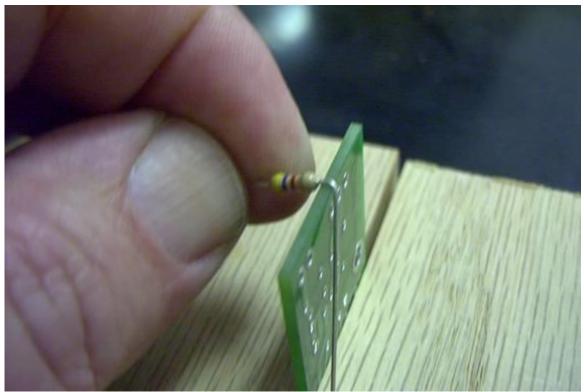


Fig. 3 - Resistor after first lead is bent over edge of board.

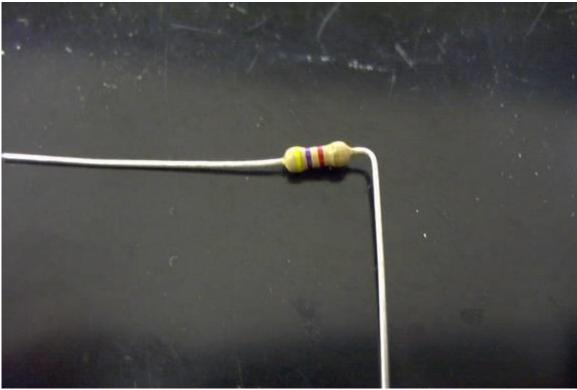


Fig. 4 - Resistor with 1 lead bent. Now you are ready to repeat the bending process with the other lead.

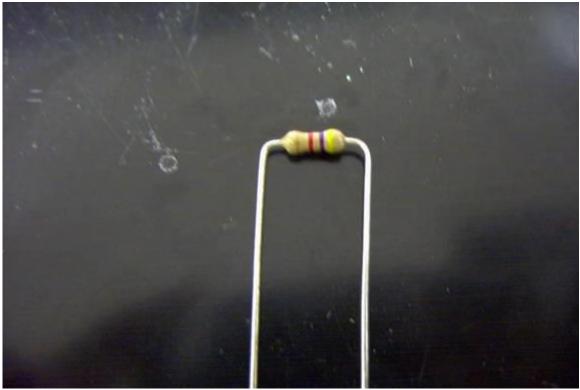


Fig. 5 - Resistor with both leads bent. Ready for insertion into the board.

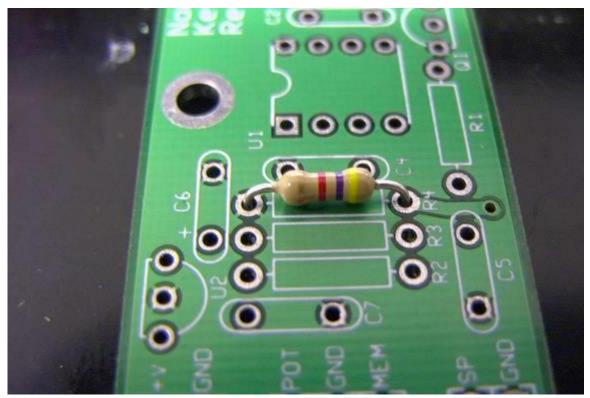


Fig. 6 - Resistor in place ready to solder. Notice how nicely it fits? You can do it too! You will be amazed when you find out how easily it is done. I usually bend the leads on the back side of the board at a 45 degree angle to hold the resistor in place so that it doesn't fall out when I turn the board over to solder. ©

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COMPARISON OF THREE LNA PRE-AMPS

PART 1

<u>BY</u>

Jerry Hess, W9KTP

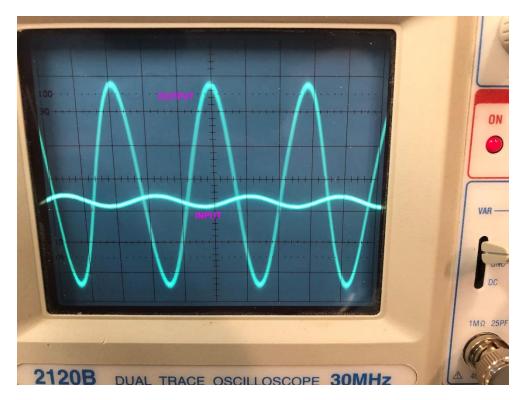
For anyone interested in working DX on 80 or 160 meters, improving the received signal is an important factor. Beverage and rhombic antennas are great but very few hams have the space for such antennas. Another consideration is a Low Noise Pre-Amplifier. I've put together three of them with the intent of measuring their capabilities. I chose the following units: first is the SV1AGN unit which comes preassembled for around \$40 and is based on push-pull J310 JFETS (Note 1). It is broad banded. The second is a circuit designed by ARRL's Doug DeMaw, W1FB (SK). It consists of a MPF102 FET followed by a MC1350P RF/Video amplifier. It is designed for 80 and 160 meters (Note 2). An etched circuit board is available from FAR Circuits (Note 3). The last unit was designed by Phil Atchley, KO6BB and consists of a J310 JFET followed by a 2N5109 CATV transistor (Note 4). By selecting a toroid for the input tuned circuit, I was able to set the unit for 160 and 80 meters. The circuit is mounted on a 3" x 1 ¾" corner of a protoboard (Note 5). The three units are shown in the picture below. Left to right are the KO6BB, SV1AFN and W1FB units.



My first step was to bench test each Pre-Amp with my function generator and oscilloscope. My equipment is hardly lab precision but it does gives respectable, repeatable results. The generator was set for 0.01 volts or 10 millivolts and then either 3.530 MHz or 1.830 MHz. I converted the voltage readings from voltage to decibels with the following formula.

dB= 20 Log (V out/ V in)

For example, the KO6BB unit showed .148 volts on the scope set at 0.02 volts per division on 80 meters. That resulted in 23.4 dB = 20 Log (.148/.01) . This gain is more impressive as seen in the photo of the scope traces.



The following table summarizes my results.

UNIT	80 M dB	160 M dB
W1FB	38.5	38.0
KO6BB	23.4	22.9
SV1AFN	10.3	10.3

The output signal distorts on the W1FB unit when the gain was at maximum and a later test with the station receiver showed maximum gain did not increase the signal. Also keep in mind the SV1AFN Pre-Amp is broad banded so I didn't expect the gain to be as high as the others. It may prove to be very good at handling noise level.

It is important to note that these gains do not imply that "on the air" improvement will result. My next effort will be to determine how much each Pre-Amp improves the signal above the noise level. I plan to record the noise level (pre-amp on and off) and then a signal + noise level (pre-amp on and off) and calculate the improvement. All of this is depended on my technical abilities and equipment limitations.

Preliminary results seemed to show some gain perhaps 2-3 dB. It's going take some time to gather and analyze the data. Hopefully I will have results by next month in a "Part Two" of this article. See you then.

73's,

Jerry Hess, W9KTP

jerryhess@frontier.com

Note 1: SV1AGN's unit is found at https://www.ebay.com/itm/J310-push-pull-HF-pre-amp-KIT-BUILT-TESTED/152067780927 trksid=p2047675.c100005.m1851& trkparms=aid%3D222007%26algo%3DSIC.MBE%26ao%3D1%26asc%3D39861%26meid%3Dd3fdc29cad1644da849fa0f2b6f48be3%26pid%3D100005%26rk%3D1%26rkt%3D6%26sd%3D151847476701

Note 2: W1FB's unit is found in August 1988 QST page 22

Note 3: http://www.farcircuits.net/ Page down to Pre-Amplifiers and look for "QST AUG88" at the price of \$4.50 plus \$3.50 shipping.

Note 4: https://www.qsl.net/ko6bb/lf-preamp-2.html

Note 5: Mouser Part # 574-8001, Manufacturer - Vector 8001, 6.5" x 4.5" x .062" board. Jameco also has similar boards and you may want a smaller one if you are only making a single pre-amp. For anyone looking to build this unit I would be glad to share my board layout. Just send me an Email.

DX LISTINGS FOR APRIL 2020

Listings from NG3K were minor and perhaps as the result of the coronavirus. Instead I have included the entire weekly listing from the ARRL. I've also included the ARRL "Contest Corral" listings for April since most of us are 'home bound' due to the virus. Take a look down the listing and give contesting a try during the next several weeks. Have some fun and enjoy that radio. 73's,

Jerry, W9KTP

This week's bulletin was made possible with information provided by The Daily DX, the OPDX Bulletin, 425 DX News, DXNL, Contest Corral from QST and the ARRL Contest Calendar and WA7BNM web sites. Thanks to all.

TURKEY, TC10. Members of the Turkish Radio Amateur Club are QRV from special event station TC105GL until March 30. Activity is to commemorate the Gallipoli campaign of World War I. Activity will be on various HF bands using CW and SSB. QSL via the info on QRZ.com.

CAPE VERDE, D4. Max, IZ4DPV is active as D4F from Sao Vicente Island (AF-086) until March 31. Activity has been on the lower bands using SSB. Look for him also in the CQ WW WPX SSB Contest. QSL via home call.

ALASKA, KL7. Members of the Russian Robinson Club are planning an activation of Kiska Island (NA-070) from June 17 to 19 as KL7RRC/p. They will be taking two rigs for CW, SSB and FT8. QSL via N7RO.

EGYPT, SU. Tom, DL2RMC is QRV as SU9TH on 40, 20, 15 and 10 meters using FT8, FT4, CW and SSB. He will be in the country until the end of April. QSL via DL2RMC, ClubLog or LoTW.

VANUATU, YJ. Chris, VK2NYA/VK2YUS will be active as YJOCA from Port Vila, Efate Island (OC-035), until April 1. Activity is 40, 20 and 15 meters and possibly 10 meters, using SSB only. He also plans to be in the CQ WW WPX SSB Contest as a Single-Op entry. QSL direct via home call.

BRAZIL, ZZ4. Members of the Serra Lopo DX Team will be active as ZZ4A during the CQ WW WPX SSB Contest as a Multi-Single entry. QSL via PY2RMZ.

OMAN, A4. A42K will be QRV in the CQ WW WPX SSB Contest. QSL via EA5GL or LoTW.

CUBA, CO. Members of the SMP DX Club will be QRV as T42DX until March 30 on 80 to 10 meters using CW, SSB, RTTY, FT8 and FT4, including and entry in the CQ WW WPX SSB Contest. QSL via CO2AME.

SCOTLAND, GSO. Members of the Scarlett Point Club are active as GSOSP. Their length of stay is unknown. QSL via LoTW only.

ETHIOPIA, ET. Ken, K4ZW will be QRV as ET3AA starting March 27 for one week, pending successful flight arrangements.

MARTINIQUE, FM. Laurent, FM5BH will be active in the CQ WW WPX SSB Contest on all bands. QSL via W3HNK or LoTW. Also, Miguel, EA1BP will be active as TO7BP during the CQ WW WPX SSB Contest. Outside of contest he will be signing FM/EA1BP on various HF bands. QSL to home call via the Bureau.

EASTER ISLAND, XRO. A Polish team will be active as XROYSP from September 15 to 30. Operators include Jan, SP3CYY, Jurek, SP3GEM, Wlodek, SP6EQZ, Janusz, SP6IXF, Roman, SP9FOW and Piotr, SP9RCL. Activity will be on 160 to 10 meters using CW, SSB and FT8. QSL via SP6IXF, ClubLog's OQRS, LoTW or via the Bureau.

THE NETHERLANDS, PA75. Operators Harm, PA0HPG, Michel, PA0VCC, Ad, PA2PCH, Nico, PA3ADU, Gerrie, PA7TT, Harm, PD0GIB, Bert, PD2B and Gerard, PD2VW will activate special event station PA75ASN from April 1 to May 7 to commemorate the 75th anniversary of the liberation of Assen City. Operations will be on 80, 60, 40, 30, 20, 17 and 15 meters using CW, SSB and FT8/FT4. QSL via PA0VCC, direct or by the Bureau.

LUXEMBOURG, LX. The LX7I team celebrates its 20th anniversary with the call sign LX20I during the CQ WW WPX SSB Contest. QSL via LX2A.

CZECH REPUBLIC, OK. The Czechoslovak DX Club celebrates its 30th anniversary on the air as OL30DXC until the end of the year. QSL via OK2PXJ.

THIS WEEKEND ON THE RADIO. The CQ WW WPX SSB Contest, FOC QSO Party and QCX Challenge are on tap for this weekend. The QRP Fox Hunt, Phone Fray, CWops Mini-CWT Test and UKEICC 80 Meter Contest are all on April 1. Please see March QST, page 79, and the ARRL and WA7BNM Contest Web Sites for details.

Bruce Draper, AA5B, aa5b.corral@gmail.com

Contest Corral

April 2020

Check for updates and a downloadable PDF version online at **www.arrl.org/contest-calendar**.

Refer to the contest websites for full rules, scoring information, operating periods or time limits, and log submission information.

Start - Finish Date-Time Date- Time		Bands	Contest Name	Mode	Exchange	Sponsor's Website		
1	2000	1	2100	3.5	UKEICC 80-Meter Contest	Ph	4-char grid square	ukeicc.com/80m-rules.php
2	1700	2	2000	3.5	SARL 80-Meter QSO Party	Ph	RS, serial, grid locator	www.sarl.org.za
2	1700	2	2100	28	NRAU 10-Meter Activity Contest	CW Ph Dig	RS(T), 6-char grid square	nrau.net/activity-contests
2	2000	2	2200	1.8-50	SKCC Sprint Europe	CW	RST, SPC, name, mbr or power	www.skccgroup.com
4	0400	4	0800	7	LZ Open 40-Meter Sprint	CW	Serial, serial received from last	www.lzopen.com/lzocc40

					Contact		QSO	
4	1000	5	0400	14	Contest PODXS 070 Club	Dig	SPC, mbr or name	www.podxs070.com
4	1000	3	0400	14	PSK 31 Flavors Contest	Ыg	SFC, IIIbi di Haine	www.pouxso/o.com
4	1300	5	0100	1.8- UHF	Nebraska QSO Party	CW Ph Dig	County or SPC (grid square on FT8)	www.arrl.org/sections/view/nebraska
4	1400	5	0200	1.8-144	Louisiana QSO Party	CW Ph Dig	RS(T), Parish or SPC	laqp.louisianacontestclub.org
4	1400	5	0200	3.5- UHF	Mississippi QSO Party	CW Ph	RS(T), county or SPC	www.arrlmiss.org
4	1400	5	2000	1.8- UHF	Missouri QSO Party	CW Ph	RS(T), county or SPC	w0ma.org/index.php/ missouri-qso-party
4	1400	5	2200	3.5-28	Florida State Parks on the Air	CW Ph	Park ID or SPC	flspota.org/rules
4	1500	5	1500	1.8-28	SP DX Contest	CW Ph	RS(T), Province or serial	spdxcontest.pzk.org.pl
4	1600	5	1600	3.5-28	EA RTTY Contest	Dig	RSQ, EA province or serial	concursos.ure.es/en/eartty/bases
5	0000	5	0400	3.5-14	North American SSB Sprint Contest	Ph	Other station's call, your call, serial, name, SPC	ssbsprint.com/rules
5	0600	5	1000	50	UBA Spring Contest, 6 Meters	CW Ph	RS(T), serial, UBA Section (if ON)	uba.be/hf/contest-rules
5	1900	5	2030	3.5	RSGB RoLo SSB	Ph	RS, previous 6-char grid square received	www.rsgbcc.org/hf
6	0800	12	2000	All	IQRP Quarterly Marathon	CW Ph Dig	RS(T)	www.arimontebelluna.it
6	1900	6	2030	3.5	RSGB 80-Meter Club Championship, CW	CW	RST, serial	www.rsgbcc.org/hf
6	1900	6	2300	144	144 MHz Spring Sprint	CW Ph Dig	4-char grid square	sites.google.com/site/ springvhfupsprints
7	0100	7	0300	3.5-28	ARS Spartan Sprint	CW	RST, SPC, power	arsqrp.blogspot.com
11	0000	11	2359	1.8-28	QRP ARCI Spring QSO Party	CW	RS, SPC, mbr or power	qrparci.org/contests
11	0700	12	1300	1.8-28	JIDX CW Contest	CW	RST, Prefecture number or CQ zone	jidx.org/jidxrule-e.html
11	1200	12	1200	1.8-28	OK/OM DX Contest, SSB	Ph	RS, 3-letter OK/OM county code or serial	okomdx.crk.cz
11	1200	12	1200	3.5-28, 144	F9AA Cup, PSK	Dig	RST, serial	www.site.urc.asso.fr
11	1200	12	1200	3.5-28	FTn DX Contest	Dig	RST, US state or VE province or serial	europeanft8club.wordpress.com
11	1200		2359	1.8-50	SKCC Weekend Sprintathon	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
11	1400		0200	1.8-50	New Mexico QSO Party	CW Ph Dig	Name, county or SPC	www.newmexicoqsoparty.org
11			1800	1.8-144	North Dakota QSO Party	CW Ph	RS(T), county or SPC	ndarrlsec.com
11	1800		2359		Georgia QSO Party	CW Ph	RST, county or SPC	www.georgiaqsoparty.org
11				1.8-28, satellites		CW	RST, ITU zone	gc.qst.ru/en/section/32
12	1000		2200	3.5-14	WAB 3.5/7/14 MHz Data Modes	Dig	RS, serial, WAB square or country	wab.intermip.net/Contests.php
	1200			3.5-7	International Vintage Contest HF	CW Ph	RS(T) 4-char grid square	contestvintage.beepworld.it
12			1600	3.5	Hungarian Straight Key Contest	CW	RST, serial, power code	hskc.ha8kux.com
	0000			1.8-28	4 States QRP Group Second Sunday Sprint	CW Ph	RS(T), SPC, mbr or power	www.4sqrp.com
14			2300	222	222 MHz Spring Sprint	CW Ph Dig	4-char grid square	sites.google.com/site/ springvhfupsprints
15				3.5-14	NAQCC CW Sprint	CW	RST, SPC, mbr or power	naqcc.info
15	1900			3.5	RSGB 80-Meter Club Championship, SSB	Ph	RS, serial	www.rsgbcc.org/hf
17	2100			1.8-28	Holyland DX Contest	CW Ph Dig	RS(T), 4X area or serial	iarc.org/iarc/#HolylandContest
18				3.5-7	ES Open HF Championship	CW Ph	RS(T), serial	erau.ee/en/es-open-contests
18	0600	19	0559		Worked All Provinces of China DX Contest	CW Ph	RS(T), BY province or serial	www.mulandxc.org
18	0700		0659	3.5-28	YU DX Contest	CW Ph	RS(T), YU/YT county or serial	www.yudx.yu1srs.org.rs
18			1800	3.5-21	QRP to the Field	CW Ph	RST, SPC, name or SOTA	www.zianet.com/qrp/qrpttf
18	0900		2359	3.5-28	CQMM DX Contest	CW	RST, continent, category code	www.cqmmdx.com/rules
18	1400	19	2000	All	Texas State Parks on the Air	CW Ph Dig	RS(T), park or SPC	www.tspota.org/rules

18 1600 19 0400 3.5-28 Michigan QSO Party CW Ph Serial, county or SPC www.miqp.org/Rules.htm 18 1700 19 1300 3.5-28 EA-QRP CW Contest CW RST, category code www.eaqrp.com 18 1800 18 2159 1.8-50 Feld Hell Sprint Dig RST, mbr, SPC, grid sites.google.com/site/feldhellclub 18 1800 19 1800 1.8-144 Ontario QSO Party CW Ph RS(T), ON county or SPC va3cco.com/oqp/rules.htm 19 1800 19 2359 3.5-28 ARRL Rookie Roundup, SSB Ph Name, 2-digit year first licensed, state/province/XE area/"DX" www.arrl.org/rookie-roundup 20 0100 20 0300 1.8-28 Run for the Bacon QRP Contest CW RST, SPC, mbr/power qrpcontest.com/pigrun 20 0000 22 0200 1.8-28 SKCC Sprint CW RST, SPC, mbr/power www.skccgroup.com 22 1900 22 2300 432 432 MHz Spring Sprint									
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	26	1700	26	2059	3.5-28	BARTG Sprint 75	Dig	Serial	bartg.org.uk
27 1300 28 0400 1.8-28 QCX Challenge CW RST, name, SPC, rig qrp-labs.com/party.html	27	1300	28	0400	1.8-28	QCX Challenge	CW	RST, name, SPC, rig	qrp-labs.com/party.html
29 2000 29 2100 3.5 UKEICC 80-Meter Contest CW 4-char grid square ukeicc.com/80m-rules.php	29	2000	29	2100	3.5	UKEICC 80-Meter Contest	CW	4-char grid square	ukeicc.com/80m-rules.php

Links Sent In

This was sent by Tom W8FIB

Boat load of R-390A Receivers

From Tom W9QN

THIS IS HAM RADIO " 1970 ARRL Promo Film

 $\underline{https://www.youtube.com/watch?v=v6-ydrdTPhM}$

The perfect companion for members on the go! Includes current and back issues of *On the Air* magazine and *QST*, ARRL's monthly membership journal. Stay up to date on the latest happenings and features right from your mobile device. The **ARRL Magazines App** is available free for download in Apple's <u>App Store</u> and <u>Google Play</u>, or visit <u>www.arrl.org/ota</u> for more info.

DAYTON HAMVENTION QSO PARTY

Let's celebrate the many years we have all had at the Great Gathering we call Hamvention. We also want to remember Ron Moorefield W8ILC who never missed a Hamvention and contributed to our club until his recent death. Let's light up the airwaves with our remembrances of Hamventions of the past! See you on the air! K3LR, Tim Duffy and W8CI, Michael Kalter.

Here is the deal: 12-hour event, 8 a.m. to 8 p.m. EDST on Saturday of Hamvention May 16,

2020. Operate CW or SSB on 160, 80, 40, 20, 15 and 10 meters. The exchange is a signal report and first year you attended Hamvention. If you have never attended Hamvention you send 2020.

Send your score (number of QSOs) to 3830scores.com within 5 days of the event. You can print a certificate on line via $\underline{\text{www.HVQP.org}}$. More details will appear on the Hamvention QSO Party web site being set up now.

Special bonus: W8BI, the club call of the Dayton Amateur Radio Association (DARA is the host of Hamvention) will be activated by designated DARA members from their home stations. You can add 10 points for each band/mode QSO with W8BI (12 available). So you can earn 120 bonus points (like having 120 additional QSOs).

Visit: https://clicks.aweber.com/y/ct/?l=ELXKD&m=i2D06S69Ov08Pns&b=pkdp
r807bboxNJFnSiyKkA for the most details for this event

300 Industrial Park Rd Starkville Mississippi 39759 USA If you have ham items for sale, email me a list along with prices and contact information. I will put it in the next newsletter.

I want to thank those that have been sending in articles for the newsletter. All items are appreciated.



Until Next Time,

73

John

W3ML

http://nwidxclub.weebly.com/



DX



