



**Next Meeting:**  
 Tuesday, October 16, 2023, 7:00pm  
 Garden City Presbyterian Church  
 1841 Middlebelt Rd.  
 Garden City, MI 48135

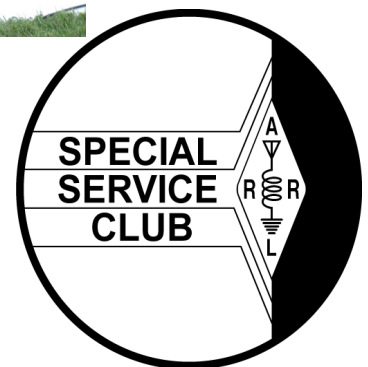
- ◆ Believe it or not, this month (tomorrow night!) we will begin the process of selecting our club officers for 2024. I for one am still having trouble grasping that it's already 2023, let alone that the year is almost over. Have you considered taking more of a leadership role in our club? In addition to the four elected officers, we have a multitude of committee and projects that are in need of leadership. Let me encourage you tomorrow night: don't just sit there looking handsome, throw your hat into the ring.
- ◆ OK, you've got to eat. Your xyl doesn't want to get up on a Saturday morning, but you're wide awake. What can you do until she's up? Why not join us for breakfast to Big Boys, at the corner of Ford Rd. and Harrison (just east of Middlebelt), at 9:00am. The food's good, and the conversation's even better. Hope to see you there.  
 By the way, your xyl is welcome to join us. Bring your whole family, friends, anybody you like.  
 If you can't make it in person, join us on the GCRA Repeater, 146.86MHz -600, 100HzPL. We'd love to see you there, but if we can't we'd still like to hear from you.
- ◆ Speaking of the repeater, don't forget to join us for the Sunday Night Net, every Sunday at 9:00pm. The net is open to any licensed ham, or for that matter anyone as long as they're with a licensed control operator. We're social and informal, and want to hear from you.



**A reminder from our Treasurer:**

I will begin collecting 2024 dues at the September meeting. The current fee is \$17.00. Please bring exact change if payment is by cash. Checks to GCARC also will be accepted. Dues can be paid in person during meetings or by mail to our P.O. Box listed above. Please mention our club to prospective new members who may be interested in joining.

73.  
 Richard Zarczynski / AC8FJ  
 GCARC Treasurer



# Mat-Matics # 119

## When Good Enough Just Isn't Part VI: Henry Connector Replacement

*Mat Breton, N8TW*

My Henry Radio Classic-2K linear amplifier has a lot of good things going for it: it is sturdy, it is pretty, and it works. But it wasn't (and still isn't) perfect. As you probably know from previous articles, I haven't been afraid to modify it to make it (in my opinion) better. In spite of the previous modifications, one particular item has been bugging me: the Henry has a UHF (PL-259) connector for the output (to the antenna), but a BNC (aka "Bayonet") connector for the exciter (from the transmitter). This is a common feature across the Henry desktop and console linear amplifier line-up, although I've seen Henry VHF "brick" amplifiers with two UHF connectors on them.



*BNC, UHF, and N type Connectors*

The Henry was designed to operate with a maximum exciter power of 120W of input power (coincidentally my FT-980 has a maximum transmit power of 120W). BNC connections will easily handle this level of power. I use BNC connectors all the time on lab equipment. They are convenient quick-disconnects. And I understand why it was used on the Henry: this is an easy and convenient way to ensure that no one ever mixes up the input and output connections when putting them on (and therefore potentially blowing up your transceiver). However, I don't consider BNC connections as "secure" as a UHF or an N connector (they can accidentally come off more easily, and they can't handle as much mechanical stress). Because the RF jumpers in my lab are all UHF using RG-8X "type" or RG-8 "type", they will not really fit a standard BNC connector. I've made do with adapters up to now. Additionally, the weight of the jumpers, traveling in the air for several feet, was causing a concerning amount of torque on the connector. Since I was already taking the Henry apart to do some measurements I decided to change this BNC connector while I was at it.



*Jumper with a UHF <-> BNC adapter on original Henry rear panel*

One problem with making any “improvement” is that you want to make sure you are actually improving things.

1. Whenever possible you should resist changes that will not make a real improvement: don't make a change just for the sake of making a change (if it ain't broke ... don't fix it?).
2. You should know and understand the negative or side-effects of making the change ... before making it.
3. Whenever possible you should make the change so that it can be “backed out” or removed later.
4. Whenever it makes sense you should be able to take measurements before your “tweak”, and “after”. If there isn't an improvement, consider restoring it back to original condition.

Pros/Cons of BNC (versus UHF or N connectors): I chose a UHF connector replacement. In theory I could have used either a UHF or an N-Type. Theoretically an N-Type connector has better performance ... but at HF frequencies the advantages are minimal. Most amateur radio jumpers are UHF ... so I chose UHF (plus I had a UHF chassis jack in my junk box).

Characteristic	BNC	UHF	N-Type	Comment
Max “Useable” Frequency	< 2GHz	< 50MHz	< 11 GHz	All are OK for HF.
Max Continuous Power	< 200W	< 4KW	5KW @	All are OK for 120W
Max Voltage (Vp-p)	500V	3KV	4.2KV	All are OK for me
Robustness	-	+	+	BNC is not robust
Cost	\$	\$\$	\$\$\$	
Environmental Protection	--	-	+	Not applicable for indoors
Size	++	+	-	All would work

*Some figures are complex to define (frequency, ambient temperature ...)*

In this case I felt comfortable making this change. Applying the suggestions would likely result in:

1. The improvement: I wanted to make a more robust connection that was more compatible with my shack jumpers. Extensive use of both types of connectors
2. The negative effects: It would now be possible to inadvertently reverse the exciter and antenna connections on the linear if one wasn't careful.
3. Reversible: The changes could be reversed such that they weren't visible (by using a different BNC connector with a flange), but a larger hole was still required.
4. In this case I considered measurements to not be required, as the improvements were largely mechanical in nature.

The modification was very quick: it involved removed removing and disassembling Henry “RF Deck”, removing the BNC connector, enlarging the existing hole and adding additional holes for the flange connector, adding the new UHF flange connector, and putting the unit back together. The total required time was about 30 minutes.

**Summary:** I was able to quickly make this change. If necessary I can easily back it out and put a BNC flange connector back on with no significant visible effects.



*Before and after of the Henry rear panel.*

The web is full of “hacks” and “tweaks” that do not provide a good description of how they work, what the negative side effects are, and data showing the before/after results. Before doing any hack or tweak, you should know exactly what the modification is and how it really works. Modifying things because someone you don’t know said to do it is risky and ill-advised.



Hooked up and ready to go ...



### Upcoming SWAP Meets:

- 10/7/23 - Central Kentucky, Lexington, KY
- 10/7/23 - Kalamazoo, Kalamazoo, MI
- 10/14/23 - Muskegon Color Tour, Muskegon, MI
- 10/28/23 - Hazard, Hazard, KY
- 10/29/23 - Massillon, North Canton, OH
- 12/3/23 - Fulton County Winterfest, Archbold, OH
- 12/3/23 - L'Anse Creuse, Troy, MI
- 1/15/24 - SCARF Hamfest, Shade, OH

*-Thanks to Rich, W8DOW, for this listing.*



Send me your best caption.  
I'll post the best one in a future Wireless.

**NEVER TRUST AN ELECTRICIAN  
WITH NO EYEBROWS**





# Jamboree on the Air

## -Rich Zarczynski, AC8FJ



**Jamboree on the Air and Jamboree on the Internet** will take place **October 21-22, 2023.**

**Jamboree on the Air (JOTA)** is the amateur radio element of JOTA/JOTI, with Scouts all over the world speaking to each other by means of amateur radio. Scouting experiences are exchanged and ideas are

shared via radio waves. Amateur radio involves antennas, transmitters, and receivers, sometimes at a permanent location and other times set up at a camp in a temporary installation.

Amateur radio operators are licensed by their country’s telecom authority to operate within strict guidelines. They operate the JOTA station as well as the guidelines and the world Scouting frequencies for JOTA. Typically over 20,000 amateur radio operators are helping with local JOTA/JOTI stations. Plus, many amateur radio operators are also on the air engaging with Scout stations and sharing their own Scout stories.

### World Scout Frequencies-

#### Band SSB (phone) CW (Morse)

- 80 m 3.690 & 3.940 MHz 3.570 MHz
- 40 m 7.090 & 7.190 MHz 7.030 MHz
- 20 m 14.290 MHz 14.060 MHz
- 17 m 18.140 MHz 18.080 MHz
- 15 m 21.360 MHz 21.140 MHz
- 12 m 24.960 MHz 24.910 MHz
- 10 m 28.390 MHz 28.180 MHz
- 6 m 50.160 MHz 50.160 MHz

#### HF SSB Voice

- 80 m 3.940 & 3.690(1) 3.920 – 3.940 3.670 – 3.690
- 40 m 7.190 & 7.090 (2) 7.180 – 7.200 7.270 – 7.290
- 20 m 14.290 14.270 – 14.290 14.320 – 14.340
- 17 m 18.140 18.140 – 18.150
- 15 m 21.360 21.360 – 21.400
- 12 m 24.960 24.960 – 24.980
- 10 m 28.390 (3) 28.350 – 28.400
- 6 m 50.160 50.160 – 50.200

#### HF CW

- 80 m 3.570, 3.560 – 3.570
- 40 m 7.030, 7.030 – 7.040
- 20 m 14.060 14.050 – 14.060
- 17 m 18.080 18.070 – 18.080
- 15 m 21.140 21.130 – 21.140
- 12 m 24.910 24.900 – 24.910
- 10 m 28.180 28.170 – 28.180



**HF PSK-31**<http://bpsk31.com>

Call CQ JOTA. The chart below shows the commonly used frequencies for PSK-31.

80 m 3.580

40 m 7.080 Region 2 (USA). 7.040 to 7.060 for Regions 1 & 3

30 m 10.142

20 m 14.070 *Most activity for JOTA will be on 20 m*

17 m 18.100

15 m 21.080 *Most activity can be found at 21.070*

12 m 24.920

10 m 28.120

**2 Meter FM Simplex**

147.450, 147.480, 147.510, 147.540\* \* Use 147.540 as Calling Channel. Always listen first to avoid interfering with another QSO or auxiliary or control link. Avoid 146.520, the National FM Simplex Calling Frequency, as well as 146.550, which is commonly used by mobiles and RVers.

**70 CM FM Simplex**

446.000\*, 445.950, 446.050, 446.100, 446.150 \* Use 446.000 as Calling Channel. Always listen first to avoid interfering with another QSO or auxiliary or control link.

**D-STAR**

REF033A has been allocated as a full-time JOTA/Radio Scouting D-STAR Reflector. After contact is established, stations should disconnect from REF033A and connect to one or other repeater or migrate to an unused Reflector.

SIMPLEX Channels: 145.670\*, 145.640, 145.610, 438.010. \* 145.670 and 438.010 are commonly used as the National D-STAR Simplex Channels and should be used only as Calling Channels for JOTA. Always listen first to avoid interfering with another QSO.

**DMR**<http://www.dmr-marc.net>

All wide area talkgroups are permitted for use for JOTA for establishing contacts. After contact is established, stations should utilize as few resources as possible. For international, national, and regional QSO's, stations should move their transmissions to one of the DMR-MARC UA talkgroups or to the DCI TAC-310 talkgroup.

**EchoLink**<http://www.echolink.org>

# Announcing our 4th Annual Youth "Dream Rig" Essay Contest.

The Intrepid-DX Group is a US based 501 C (3) nonprofit organization that promotes Amateur Radio activities around the world.

The Intrepid-DX Group recognizes the importance of including Youth in our great hobby because they are our future! We are continuing with our annual "Dream Rig" Youth Essay Contest to gather the views and ideas of young people involved in Amateur Radio.

What are the Prizes?

- ◆ The First-Place prize is an ICOM IC-7300!
- ◆ The Second-place prize is an ICOM ID5100AD dual band mobile radio with D-Star.
- ◆ The Third-place prize is an ICOM ID52A dual band handy talkie with D-Star.

Contest Rules:

- 1) Two-page Essay answering this question: What attracted you to amateur radio?
- 2) Contestants must be USA or Canadian Amateur Radio License Holders Aged 19 or younger.  
All contestants must be in the US, including US territories or Canada.
- 3) Promise to keep the radio for one year, not flip it, trade it or sell it, and to use it on the air.
- 4) Send an essay in plain text, PDF or MS Word attachment to [intrepiddxgroup@gmail.com](mailto:intrepiddxgroup@gmail.com) by November 30th, 2023.
- 5) You may alternatively mail it to: The Intrepid-DX Group, 3052 Wetmore Dr, San Jose, CA 95148, USA.  
Must be postmarked by November 30, 2022.
- 6) Those that have previously submitted an essay may compete in this year's essay contest as long as all other criteria are met.
- 7) The winner of the Essay Contest will be announced on our Website and Facebook page on December 15th, 2023.  
Winner must agree to provide a photo with their prize.

All submissions become the property of the Intrepid-DX Group and the winners authorize the Intrepid-DX Group to use their photographs to promote the contest.

Questions: Send an email to [intrepiddxgroup@gmail.com](mailto:intrepiddxgroup@gmail.com)  
You can follow our contest and receive updates via our Facebook page.  
Good luck to everyone!

Dave WD5COV

Vice President, The Intrepid-DX Group



# AMATEUR RADIO/COMPUTER SWAP

**SUNDAY, DECEMBER 3, 2023**

**L'ANSE CREUSE AMATEUR RADIO CLUB 50<sup>th</sup> ANNUAL SWAP & SHOP**

	<p><u><a href="#">Balkan American Community Center</a></u></p> <p>1451 E. Big Beaver Road Troy, MI 48063</p> <p><b>8 AM – Noon</b></p> <p>(Vendors with Pre-Paid tables get in at 6:30 AM For set up only. No pre-sales will be allowed to be fair to all Swap attendees)</p> <p><b>SWAP TICKET: \$10.00</b> (Kids under 12 Free)</p>	
<p><u><b>NEW &amp; USED EQUIPMENT:</b></u></p> <ul style="list-style-type: none"> <li>• <b>RADIOS</b> – Amateur, Commercial, CB</li> <li>• <b>ELECTRONICS &amp; COMPONENTS</b></li> <li>• <b>COMPUTERS AND SOFTWARE</b></li> <li>• <b>ACCESSORIES</b></li> </ul> <p><u><b>DOOR PRIZES:</b></u> (deposit swap ticket at club table)</p> <ul style="list-style-type: none"> <li>• 1<sup>st</sup> \$ 100, 2<sup>nd</sup> \$50, 3<sup>rd</sup> \$25</li> <li>• ARRL GIFT CERTIFICATES</li> </ul> <p><u><b>SWAP FEATURES:</b></u></p> <ul style="list-style-type: none"> <li>• <b>FREE PARKING</b></li> <li>• <b>FOOD &amp; DRINKS</b></li> <li>• <b>VE TESTING</b></li> <li>• <b>Talk-In: ECHO Repeater 147.08+ 100hz</b></li> </ul>	<p><b>Radio Raffle</b></p> <p><b>Icom 7300</b></p>  <ul style="list-style-type: none"> <li>➤ HF/50 Mhz Transceiver</li> <li>➤ Real-time Spectrum Scope</li> </ul> <p>Raffle ticket: \$10. Available at the club table/advanced reg. Winner will be drawn before the end of swap (You do not need to be present to win!)</p>	
<p><b>FCC EXAM SESSION:</b></p> <p>VE Testing: Doors open at 9:00 AM. You will need to bring \$15.00 cash, copies of existing licenses or CSCEs, (originals will not be accepted), two pieces of ID (one must have a photo). You must provide an FRN by registering in the FCC CORES system <b>before</b> exam day. Questions: Contact Gregg, <a href="mailto:n8gco@arrl.net">n8gco@arrl.net</a></p>		

**For Additional Information Contact:**

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Sterling Heights, MI 48313  
[n8har1977@gmail.com](mailto:n8har1977@gmail.com) - Please put 'LCARC Swap' in subject.

**\*Please see reverse side for advanced registration form\***