

Northwest Indiana DX CLUB

Volume 10, Issue 11

November 2022

President's Corner

The next meeting is November 12th at Noon. Same place as always, Round the Clock in Chesterton.

Carl, K9LA will be the guest speaker. "An Update on Cycle 25, a Review of Propagation and the Possibility of F2 Propagation on 6m."

We will also be introducing the new contest. More on that below.

Hope to see a lot of you there.

73
John W3ML
Good DXing!

"Working the World from the Black Hole"

NWI DX Club Website

<http://nwidxclub.weebly.com/>



Don't forget Steve Mollman is our 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.

<i>Northwest Indiana DX Club Officers and Staff</i>			
President	W3ML	John Poindexter	w3ml.ohn@gmail.com
Vice President	W9KTP	Jerry Hess	jerryhess@Frontier.com
Newsletter Editor	W3ML	John Poindexter	w3ml.ohn@gmail.com
W9NWI Trustee	KD9HL	Steve Mollman	kd9hl@ARRL.net
Webmaster	W9YOU	John Reardon	kd9ron@ARRL.net
ARRL Card Checker	KD9HL	Steve Mollman	kd9hl@ARRL.net

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@arrrl.net

QSL cards are available.

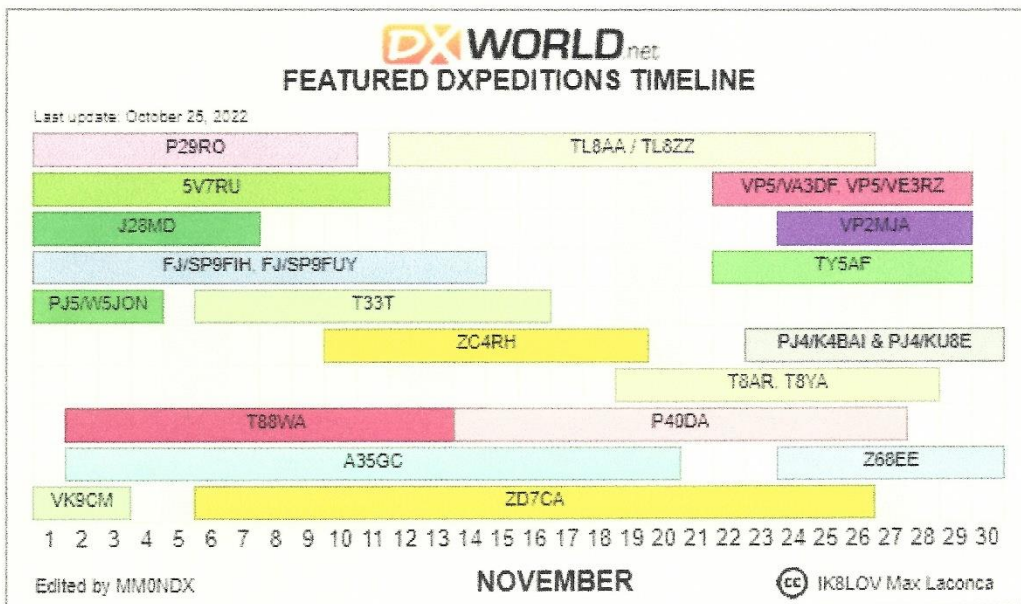
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DX LISTINGS FOR 11/2022

By
Jerry Hess, W9KTP

DX-World.net Featured DXPeditions timeline



By Permission of MM0NDX

Handy Hint

By Steve Mollman-KD9HL

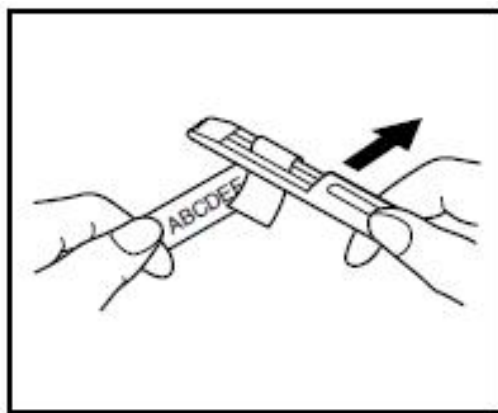
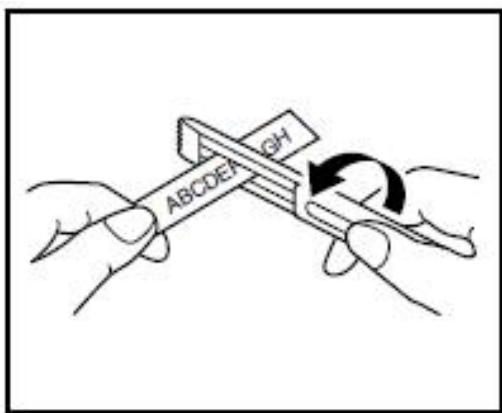
Peeling the Laminate off Label Tapes

Many of us are using labeling tape to identify coax and other connections on our equipment. Peeling the laminate off of labeling tape can be difficult. Manufacturers such as Brother have made it easier with some of their tapes having “split laminate” which can be removed by gently folding the tape lengthwise causing the laminate to separate.

This method doesn’t work with some other tapes or if you have trimmed the tape lengthwise.

A method that often works is to use a ballpoint pen that has a pocket clip.

1. Hold the tape in your left hand with the printed side facing up. Hold the pen in your right hand with the pocket clip facing up.
2. Pass the tape halfway through the long narrow space in the pen’s pocket clip.
3. Turn the pen three-quarters of a turn toward you and pull the pen away from you.
4. The laminate should separate and you can easily peel off the label backing.



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Do you have a Handy Hint that you would like to share? Contact Steve Mollman at KD9HL@ARRL.net

Member DXCC Scorecard

A Reminder

We will be listing the membership's ARRL DXCC standings in the January issue of the newsletter. If you have worked any new entities since the last listing and haven't yet submitted them to the ARRL please do so before December 26, 2021.

QSL Cards-Steve Mollman, KD9HL is our Official ARRL DXCC Card Checker. Contact Steve for card checking. You may email him at KD9HL@arrl.net for card checking details, if you desire to go that route.

Logbook of the World-To submit LOTW credits on-line, click the **Awards** tab, and in the “**Your LoTW ARRL DXCC Accounts**” section on the left side of the Logbook Awards page, select the **DXCC Award Account** for which you intend to submit an application. Select the **Award Account Menu** on the left side and then select **Application**.

The Question of the Month

(The correct answer is at the end of the Newsletter)

The entities that permit operation on the 60 meter band each have their own power restrictions for the band. Many allow only 15 watts PEP ERP. What entity allows 1500 watts PEP ERP?

- A. USA
- B. Trinidad & Tobago
- C. The Kingdom of Eswatini
- D. Japan

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A New DX Challenge – 60 Meters

by Bruce Smith, AC4G

Several months ago, I heard a lot of hype about the higher amateur bands coming to life. I was active on the 10m and 12m amateur bands and did notice quite a bit of activity on those bands from amateurs around the

world. Before too long, I had worked some new DXCC countries on 12m. This occurred this past Spring and Summer 2022. Ten meters was not as hot as 12m, but I have been able to make QSOs with countries that have not been heard at my location in years such as Southeast Asia. However, since I enjoy the low bands, activity has seemed to decrease on the typical low bands such as 80m and 160m. I assume more low band operators are spending more time on the higher bands (10m and 12m. In 2019, Joel Harrison (W5ZN) spoke at the Huntsville Hamfest DX Banquet in 2019 and had a presentation regarding his station in Arkansas. He showed his station and antennas, but there was one thing he mentioned that has been bearing on my mind. Mr. Harrison mentioned that he operated on almost all amateur bands including HF, VHF, and UHF. He said he was active on all HF bands including 60m. He suggested that we should try 60m, because if we don't use it, we could lose it. Because of Mr. Harrison's suggestion, my recent challenge initiated by me has been to try 60m; see what activity in on that band; and challenge myself to see how many domestic states and DXCC countries that I could work on the 60m band.

Sixty meters (60m) band became available to radio amateurs in 2002. Over the years, many countries around the world have allowed their amateur radio operators to use this band (5351.5 – 5366.5 kHz). In 2003, the United States Federal Communications Commission (FCC) allowed Amateur Radio privileges on a secondary basis. The frequencies were updated in 2012, power increased, and more modes allowed.

The 60m band is channelized into small segments at approximately 5 Mhz. These 60m frequencies are reserved for stations having a control operator holding a General, Advanced or Amateur Extra license. **Note that the frequencies are suppressed carrier frequencies; that is, the frequency that appears in your transceivers tuning display when your transceiver is in USB mode.**

U.S. Amateur radio operators are permitted to operate on five (5) frequency channels, each having an effective bandwidth of 2.8 kHz. See Table 1, Table 2, and Table 3 for 60m Channels designated to U.S. Amateurs. Note that there is a band segment which includes a portion for CW operating, while another segment allows SSB operation. The digital users make use of the particular frequency of 5373.0 kHz for FT8 using USB mode. Pay particular attention to Table 3 comparing “DIAL” frequencies to center frequencies. “DIAL” frequencies are the frequencies read directly from the transceiver's frequency display

Table 1: 60m Channels for U.S. Amateurs Known as “DIAL” Frequency

Channel 1	5330.5 kHz
Channel 2	5346.5 kHz
Channel 3	5357.0 kHz
Channel 4	5371.5 kHz
Channel 5	5403.5 kHz

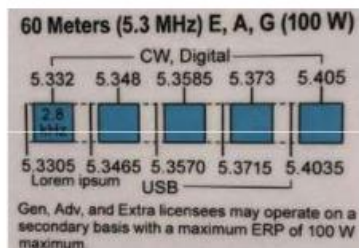


Table 2: 60m CW and USB Band Frequencies (Courtesy of ARRL Frequency Chart)

Center	'Dial' Frequency (USB)	'Unofficial' Channel Designation
5332.0 kHz	5330.5 kHz	Channel 1
5348.0 kHz	5346.5 kHz	Channel 2
5358.5 kHz	5357.0 kHz	Channel 3
5373.0 kHz	5371.5 kHz	Channel 4
5405.0 kHz	5403.5 kHz	Channel 5

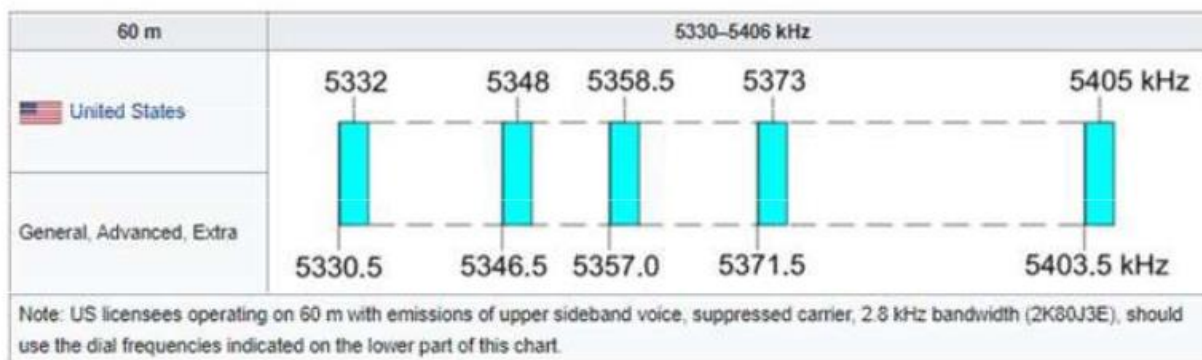
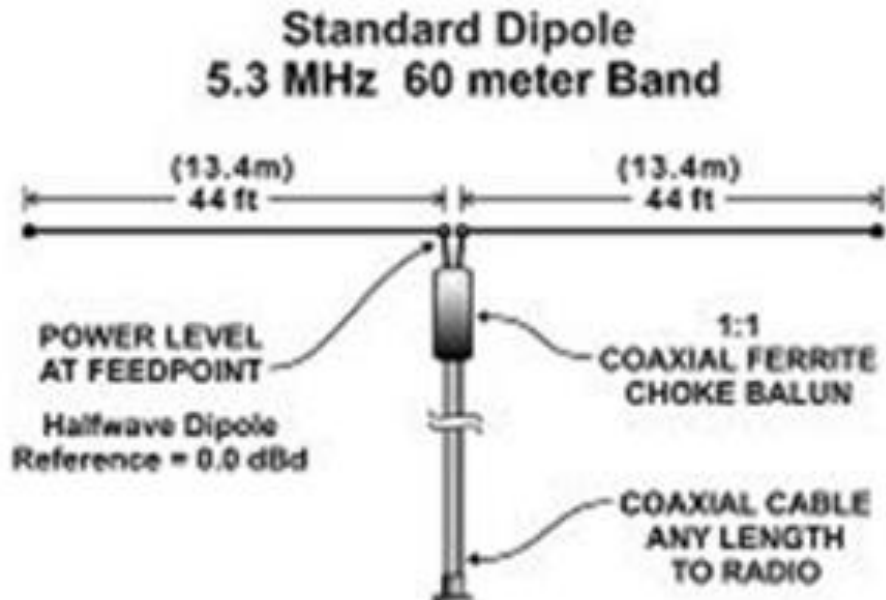


Table 3: 60m U.S. Frequencies (Courtesy of Wikipedia)

Channel 5 is the main calling frequency monitored by most DXers around the world for both USB and CW. Channel 4 is the alternate channel when Channel 5 is busy or has QRM. Channel 3, 5373.0 kHz is where all FT8 activity occurs.

U.S. Amateurs are allowed to transmit on the 60m band with an effective radiated power of 100 watts or less relative to a half-wave dipole (See Picture 1 below). For the ham operator using a directional Yagi, FCC rules require the operator to keep a copy of the manufacturers gain specifications in their station records. If they fabricate their own Yagi antenna, they must calculate the gain of their home-made Yagi and keep the results with their station records. For the ham that uses a Yagi on the 60m band, they must take the antenna gain into account when setting RF output power. For example, if your directional antenna offers 3dB gain,

your maximum legal output power on 60m should be no more than 50 Watts (50W plus 3 dB gain equals 100 Watts Effective Radiated Power). If you are like me and have no directional antenna for use on 60m, then our solution is to use a half-wave dipole type antenna allowing us to run 100 Watts output.



Picture 1: Typical 60m Half-wave Dipole Antenna

As I mentioned earlier, three modes of operation allowed on 60m are CW, SSB, and Digital modes. However, each mode comes with their own requirements which we will discuss below. Note that CW is not allowed on USB frequencies and USB is not allowed on CW frequencies.

A. Upper Sideband: USB is simple. Tune your transceiver to one of the “DIAL” channel frequencies shown above in Table 1 and/or Table 2 above and operate watching out not to splatter or over-modulate outside the 2.8 kHz channel bandwidths. Preferably, set your maximum SSB transmit bandwidth to 2.4 kHz. This should keep you within the legal bandwidth.

B. CW: CW must take place at the center of the chosen channel meaning that your transmitting frequency must be 1.5 kHz above the suppressed carrier frequency shown in Table 2 and/or Table 3 above. These frequencies equate to the following channels and frequencies as shown in Table 4: CW Center frequencies on 60m. Some transceivers transmit CW at the exact frequencies shown on their displays, while others offset the actual transmission by 600 Hz. Please check with your transceiver’s manual or with the manufacturer.

Channel 1	5332.0 kHz
Channel 2	5348.0 kHz
Channel 3	5358.5 kHz
Channel 4	5373.0 kHz
Channel 5	5405.0 kHz

Table 4: CW Center Frequencies on 60m

C. Digital (i.e., FT8): Regarding digital operation, there appears to be some debate as to the interpretation of the FCC Rules and NTIA Guidance regarding digital operation on the 60m band. The key is not to exceed the 2.8 kHz bandwidth. I tend to operate with my Yaesu FT-101MP near the center of the bandwidth allowed. Of course, my Yaesu FT101-MP will not allow me to use my VFO unless I had performed the MARS modification to allow use of the VFO. Since my FT101-MP is still virgin (stock, unmodified), operations from the channels are simple and safer. If one does the MARS mod, extreme care must be taken as not to transmit off of the authorized channelized frequencies and outside the designated bandwidth. Most, if not all FT8 operations are conducted at 5357.0 kHz. More specifically, my FT101-MP frequency readout shows 5338.5 kHz. From this point, I adjust WSJT software to transmit at or near about 1500 Hz.

My current 60m antenna is an Inverted-Vee up about 50 feet as shown in Picture 2. It is a half-wave dipole configured in the Inverted-Vee configuration. I do not use a Unun or Balun. This antenna is resonant covering the small 60m band that we amateur radio operators can utilize. The overall length is less than 88 feet in length and performs well with the best DX worked being a great distant away from Tennessee. As far as receiving, there appears to be quite a bit of noise during daylight hours, but the noise subsides at sunset. With noise presence, I wonder if the Inverted-Vee is exhibiting the characteristics of a vertical polarized antenna vice horizontal polarized antenna. This might be the subject of another article to analyze my 60m antenna.



Picture 2: AC4G 60m Inverted-Vee center insulator top of picture

Since I began operating on the 60m band, propagation appears to be a mix between 40m and 80m propagation characteristics. I have noticed while chasing DX that this band comes to life near our sunset and closes near our sunrise. This is typical for low band communications. The 60m band is less affected by D-Layer absorption than 80m. 60m is a great candidate for Near Vertical Incidence sky wave and can provide ideal local to medium HF communications. I like using my inverted-Vee because it seems to have a lower angle of radiation versus a NVIS that shoots the RF energy straight up into the clouds and ionosphere.

From my on-air activity, I have noticed that there has been a lot of activity from many DXCC countries. However, one key take away is that there is “NOT” an ARRL DXCC Award for the 60m Band. So, why would somebody spent time chasing DX on this band? First, as Mr. Harrison W5ZN suggests, “if you don’t use it, we may lose it.” I am doing my part to keep this band active making QSOs with other domestic ham operators as well as DX entities. Second, I have used my technical knowledge base to design, fabricate, and install an antenna using the basic formula $\text{Half-wave Dipole Length} = 468/f \text{ (MHz)}$. Third, it is a challenge to chase some DX and work a new DXCC country being limited by FCC rules to 100 Watts feeding my half-wave dipole antenna. I get an adrenaline rush from QSO’ing a new DXCC country. This is why I see it challenging to see how many DXCC entities I can work on the 60m band. Fourth, since the propagation characteristics are a mixture of 40m and 80m, it challenges me to use my technical propagation knowledge and operating skills to “bag” another DXCC country. The same skills required to make 80m and 160m QSOs are very useful on 60m. Who knows, someday these contacts may count as an award by the ARRL DXCC Desk.

The map below shows most of the DXCC countries having a presence on 60m and probably have changed since this map was created (Map courtesy of Wikipedia).

Frequency *	Country *	Callsign *	Grid-square *	Notes
5195.0 kHz	Germany	DRA5	JO44vq	Propagation information beacon. CW/PSK31/RTTY. Transmits: 0400–2200 UTC Summertime, 0500–2300 UTC Wintertime. See 'Propagation Beacons'.
5205.25 kHz	Luxembourg	LX0HF	JN39dr	5 W EIRP. Continuous. Carrier with callsign identification at one minute intervals.
5288.8 kHz	Croatia	9A5ADI/B	JN95jg	100 mW. Continuous. 10 seconds tone, v v v, callsign, power, locator, room temperature and atmospheric pressure.
5289.5 kHz	Denmark	OV1BCN	JO55si	Personal Beacon, H,xx +04 minutes. USB/CW/MT63 (CW – 5290.5 kHz. PWR.Lvl. 30/10/0.3 W.) (Auto response PSKR 500 /FLarq / fc= 5290.5 kHz) Updt.110520.
5290.0 kHz	South Africa	ZS6SRL	KG33wv	This beacon is the main beacon for the South African Amateur Radio League located at SARL HQ in Johannesburg. The beacon and a number of other South African stations are running WSPR mode for experimental purposes. (WSPR is configured as Dial Freq USB 5287.2 kHz TX Freq 5288.7 kHz, which is within the channel allocation)
5290.0 kHz	South Africa	ZS1OA	JF95fx	This is a permanent WSPR beacon located at Cape Town.
5290.0 kHz	United Kingdom	GB3ORK	IO89ka	Transmits sequentially at + 2/17/32/47 minutes past the hour. CW callsign identification then stepped power levels, followed 1 min. later by 48 sec. JT9A sequence.
5291.0 kHz	Switzerland	HB9AW	JN47be	Transmits sequentially on the hour + every 5 minutes. Stepped power levels. More info at http://www.hb9aw.ch/ 

Table 5: Available 60m Beacons

In conclusion, if you find yourself bored with the typical amateur bands and need a challenge to get you back on-the-air, you may want to challenge yourself with a new challenge by trying 60m (5Mhz). As you can see, it does not take much of an antenna and the countries worked can be thrilling and give you an adrenaline rush. Most modern transceivers have 60m channelized in their rig's memories. Many hams have performed the MARS modification allowing operation on 60m. I trust this article may have somewhat piqued your interest. If you are on the typical DX bands and cannot find anyone to work, call CQ on 60m. You will either work a new state or a new DX country or just merely meet a new friend who can provide additional information regarding this band. Good DX!

Bruce Smith-AC4G, is an accomplished DX'er having operated from such entities as Wake Island, Kwajalein, Marshall Islands, Hawaii and Alaska. He is on the DXCC Honor Roll with 349 entities confirmed and has confirmed DXCC on nine bands. He is a resident of Taft, TN.

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A NEW CLUB CHALLENGE?

By

Jerry Hess, W9KTP

The WAC Club Challenge has ended and unfortunately only six logs were submitted. Since the Club has 45 members that have achieved DXCC, it was expected that many more would have participated. The members that did really had a ball.

Perhaps the timing and/or the season were bad. With a long cold dark winter ahead of us, perhaps another challenge similar to WAC might drive more members into their shacks. One of our members has proposed working 5 EU, 5 SA and 5 Canadian Provinces. This should not be difficult with major contests like CQWW, ARRL DX, and Sweepstakes in the coming months.

What do you, as members, think? Possible by our next meeting on March 18, 2023? Use log format from WAC? How many will try it?

Contest starts after the meeting on November 12, 2022.

73's,

Jerry

5 EU, 5 SA and 5 Canadian Provinces

Log would be like:

Your Name/Call	Date	Time Call	Band	Mode	Location
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Links that members have sent in for the newsletter.

How to make good enemies in FT8 / FT4 <https://www.dxmaps.com/ft8.html>

<http://onetuberadio.com/> One Tube Radio

USB Type-C and USB 3.1 (now called USB 3.2) Explained <https://www.onlogic.com/company/io-hub/usb-type-c-and-usb-3-1-explained/>

<https://www.youtube.com/watch?v=AzvxefRDT84> "BASIC PRINCIPLES OF FREQUENCY MODULATION" 1944 U.S. WAR DEPARTMENT FILM FM RADIO 86794

Question of the Month Answer:

B. Trinidad & Tobago allows 1500 watts PEP ERP. Most others restrict the ERP to the 15 watt to 100 watt range.

The USA maximum power is 100 Watts PEP ERP except for emergency use in Alaska where 150 watts PEP ERP is allowed. Grenada and Denmark (including the Faroe Islands) allow 1000 watts PEP ERP and Kenya allows 500 watts PEP ERP.

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FOR SALE ITEMS

Let me know when an item is no longer for sale so I can remove it.

The following equipment is up for sale. Will accept PayPal, cash, MO, or personal check. Shipping is available for additional cost. For more information on any of the listed items please email Mike at aj9c@indy.rr.com. Prices are listed below the pictures.



Remote Antenna Tuner



Remote Antenna Tuner Picture 2

I purchased this to make a remote antenna tuner. There is a vacuum variable capacitor with a motor and a ribbon inductor with the motor. The unit is complete.

Asking Price: \$125.00



SCI-6 Sound Card Interface Kit

Interface kit to use with your radio to get on FT8, PSK31, RTTY, WSJT.

Asking Price: \$15.00



I have also a Harris RF Channel 2 TV amp unit which I have used on 6m for the past several seasons. 10-15w in will deliver 1k output. The purchaser may want to tidy up connections. This includes the power supply to operate the amp. I also have documentation. There is an extra amp deck that could be used via a combiner to increase output or as spare parts. (I have it for spare parts and have not fired up the 2d amp deck.). Included is a DPDT relay with N connectors. I have I believe 3 addition PS that come with the purchase. These again were purchased for spares....just in case.

Price for the 6m amps/parts \$1000

Drake MS-4 speaker \$60

Drake R4 series INRAD 2.1 Khz SSB filter \$75

Collins 180L tuner \$125

HD-73 rotor and control box (no lower mast clamp) works \$150

Payment by check, MO or Zelle.

Contact AJ9C at

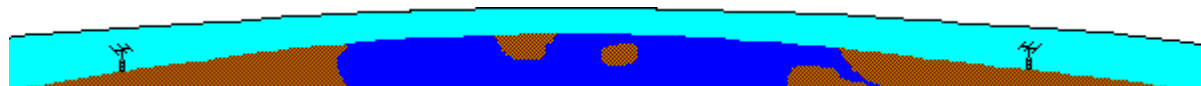
aj9c@indy.rr.com

or call 765-661-8495. Leave a message
if you call.

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.

For Sale items will be removed from the newsletter after 3 months.

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://nwidxcclub.weebly.com/>



DX

