

# THE PRINTED CIRCUIT

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## **CLUB CONTACTS:**

**President: WOTYG-Derek**  
**Vice President: WAOZQG-Rich**  
**Secretary: KDOFJR-Bill**  
**Treasurer: KDOYTI-Craig**  
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## **CLUB COMMITTEES:**

**Repeater: NOREA/WBOGXD**  
**Field Day: KA0RLR**  
**Hamfest: WOTYG**  
**Ham Testing: NOREA**  
**Estate Sales: KA0RLR**

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Greetings! This month we are going to be discussing the beginning of storm season and the difference between temporary and permanent installation in your vehicle. So, on with this month's newsletter.

## **Temporary vs Permanent:**

With today's radios, and vehicles, sometimes it's much easier to do a temporary install just to get on the air.

Doing a permanent install sometimes requires a lot of disassembling of parts of the vehicle just to install the radio. This means removing your dash or at least part of it to gain access, routing your power through the

firewall and to your power source and ground, and routing your antenna coax. This can take as much as 8 hours or more depending upon the make of your vehicle. When doing the permanent install, another thing you will want to include is a firewall circuit breaker. This will protect not only your vehicle, but also your radio as well. Its another added protection that you will want and is at very low cost.

Most radios pull roughly 10 amps of power draw.

When doing a temporary install using your power outlet (cigarette lighter), if you utilize a high quality plug adaptor, preferably one with a fuse in it to provide added safety for your radio and vehicle.

As for antennas, with the permanent mount for your radio, then you may want to consider a permanent mount antenna. Something like an NMO mount on your roof or trunk. Yes you will have to drill a hole, but, as they say, "no guts, no glory". You will have easier run of your coax this way without the chance of pinching it in a window or door.

If you are utilizing the temporary mounting method, then I would suggest using a high quality mag mount antenna. Comet, Diamond, Larsen, and Tram all make very good mag mount antennas with swr ratios around 1.5:1 or less.

Whichever way you choose, just be sure to double check all of your connections and be safe.

## **Severe Weather Season:**

Its March and we all know what that means. The start of storm season. The season starts off rather dull, but ramps up in May and June which are the two main months where we see tornados. We have had them as early as Feburary and as late as October.

The role of ham radio operators in some areas are as certified storm spotters, gaining their training from the National Storm Prediction Center in Oklahoma. Each year they make the trip up to Nebraska to teach the course and test the ham operators who sign up for the course.

In Lancaster County, The Ham Radio Club works directly with the Emergency Operations Center and the Hams are the spotters who go out to assigned locations during the storms. Reports are issued directly through the local repeater which becomes the ARES repeater during these times.

Our abilities with our equipment to be able to reach distances of up to 50 miles with our radios makes us the perfect choice to utilize during times of need.

One last thing to mention, ONLY a person who is a trained spotter should be out doing the spotting. If you havent had the training, and want to help, then offer to do logs and monitor the repeater being used. You will be doing a great service and you will be a part of the team.

## **FREE FLEA MARKET!!**

**It's going to be Saturday morning, March 20th in ZQG's garage in South Council Bluffs. Starts at 8AM (7AM for vendor setup). Be early. Most Fleas are pretty much over by 10:30. Put this address in your GPS:  
2306 Rolling Hills  
Co/Blfs 51503**

I was able to read a number of reviews from Shark Antennas on their new SH-2M58 antenna. This is a mag mount, usable on 2m, 6m, 70 cm. Now, to use on 70 cm, you need very top quality coax and fittings. It retails for anywhere from 40 to 60 dollars depending on where you look to purchase it. I had the opportunity to personally speak with a storm spotter from Oklahoma, I don't remember his call sign, but he stated that he had 65 plus mph winds and the antenna performed flawlessly and never moved an inch. I was truly impressed by that.



## Digital Radio:

We are in an age of radio now where we can literally use an HT and talk across the world with it.

The problem for hams is not the technology, but what radio gives us the most bang for the buck, and which digital mode do I choose.

There are so many it can get to be confusing. Here are the modes of digital that are available to Ham Operators.

**1. DMR** MARC- This is the Motorola Amateur Radio Club worldwide network. This seems to be the most used.

**2. DSTAR**- Digital Smart Technology for Amateur Radio . D-STAR is a digital voice and data protocol specification for amateur radio. The system was developed in the late 1990s by the Japan Amateur Radio League and uses minimum-shift keying in its packet-based standard.

**3. SYSTEM FUSION**- System Fusion is Yaesu's implementation of digital communications mode for voice and data, including pictures. It utilizes a customized, yet open, C4FM FDMA standard. ... This function instantly recognizes whether the received signal is C4FM digital or conventional FM. The communication mode automatically switches to match the received mode.

**4. P25**- Project 25 (P25 or APCO-25) is a suite of standards for interoperable digital two-way radio products. ... P25 radios are a direct replacement for analog UHF (typically FM) radios, but add the ability to transfer data as well as voice, allowing for more natural implementations of encryption and text messaging.

**5. NDXN**- NXDN™ is the result of a joint technical alliance between Icom Incorporated and JVC KENWOOD Corporation. At the beginning, the main goals of this collaboration were to provide a low complexity digital two-way radio protocol that satisfied the FCC narrowbanding mandate at the initially proposed deadline of 2005, be a future-proof protocol that would still be viable even when 12.5 kHz spectrum became full and to offer an alternative “de-facto” standard to the Land Mobile Radio (LMR) industry that allowed the development of digital radio products without the excessive premium of some competing digital technologies. The number of radio terminals alone provided by the vendors with product has reached well over half a million units worldwide by the end of 2011, and is growing in the tens of thousands each month. NXDN™ has truly become a “de-facto” protocol as per one of the initial goals mentioned above.

Dstar is the oldest, being developed in the early 90s in Japan. While there are many choices, and, more being developed every year, it seems that it is becoming a virtual buffet for the choosing.

What would be great is a radio that does **every** mode. Now THAT would be a radio to have.

We do have the capability of cross mode talking through hotspots and through gateways, but, a truly multi-mode radio would be the absolute greatest.

**The Lincoln Hamfest** is slated for:

Saturday, June 19, 2021

84th and Havelock Ave., Lincoln, NE

There are a lot of items still left over from the estate of Mike Donovan. There are quite a few antennas, mobile antennas, some various radios, and a complete set of test equipment.

The plan is to have a "garage sale" at their QTH on Memorial Day weekend. So look for more details to come along with a complete list of items in next months printed circuit.

Also, be sure to tune into the club meeting on zoom in May, as there will be a surprise guest speaker. It should be an awesome presentation!

Til next month,  
73's to all  
Rick, KA0RLR