



**Meetings are held on the 2nd Monday of each month at 7:00 pm  
On the K8EEN Repeater shown below.  
This will continue until public meetings at the Red Cross resume.**



**K8EEN Repeater: 146.790. MHz (600KHz with PL of 71.9 Hz)  
K8EEN-R Echolink Node: 809800  
K8EEN Repeater: 444.600 MHz (+5 MHz with PL of 71.9 Hz)**



### INSIDE THIS ISSUE

<i>President's View</i>	<b>1</b>
<i>Ham Radio News &amp; Information</i>	<b>2</b>
<i>March Meeting Minutes</i>	<b>3-4</b>
<i>Radio Activity</i>	<b>5-6</b>
<i>Battery Tending</i>	<b>7-8</b>
<i>May / June Calendar</i>	<b>9</b>

### President's View

**Louie Wilkinson, NT8I**



I hope this newsletter finds all of our members in good health as we continue to progress through this ever evolving situation. As the Ohio stay at home order was extended through May. I feel that it is an easy decision to hold the may meeting via the repeater as we did in April.

This will be May 11th at 7PM on the K8EEN repeater. Please join us there even if you just want to listen as this is a great way to say informed and voice your opinion on upcoming club events. One topic of discussion will be Field day and how that might look different this year compared with years prior.

I wish everyone the best, as we continue to learn how to live in our new reality and I hope that everyone is able to stay safe and healthy.

Eventually we will get back to 'normal' and sit around drinking coffee on a Friday morning, but for right now it is important that we keep ourselves and each other safe, so we are still around to enjoy that coffee.

73,

Louie,  
NT8I

MVARC Monthly Meeting

We will be holding our Monthly Meeting on Monday May 11, on our K8EEN Repeater: 146.790. MHz (600KHz with PL of 71.9 Hz) at 7:00 pm. Please tune in to stay informed, participate and share your views.

Visit us on Facebook:

Mount Vernon Amateur Radio Club

Visit our new website:

<https://mvarc.net>

Please email for inquires and information at:

[info@mvarc.net](mailto:info@mvarc.net)

Traffic Nets:<http://www.ossbn.org/>

Ohio Single Side-band Net.org, our Ohio connection for what is going on in the Ohio Traffic System. The Net meets on 3.972.5 KHz at 10:30 a.m., 4:15 p.m. and 6:45 p.m. daily. Alternate Frequency for all sessions 3.968 KHZ

<http://www.cotn.us/> The Central Ohio Traffic Net is a part of the Ohio Section of the National Traffic System. We meet daily to handle traffic; all licensed amateur radio operators are welcome to check in and to learn how to handle traffic. The Net meets daily at 7:15 p.m. local time.

Area Radio Clubs:

Delaware Amateur Radio Association: <http://k8es.org/>

Newark Amateur Radio Assoc: <https://www.n8ara.org/>

(Mansfield) InterCity Amateur Radio Club: <https://iarc.club/>

The ARRL Ohio Section calendar lists many interesting events around Ohio. The webpage is shown below:

<https://arrl-ohio.org/g-calendar/default.html>

**The Mount Vernon Amateur Radio Club Officers**President:

Louie Wilkinson, NT8I

Vice President:

Greg Short, W8DOH

Secretary

Michael Jacobs, KE8HGE

Treasurer:

Terry Windsor, KI8N

Club Call Trustee:

Don Russell, W8PEN

Equipment Trustee:

Barry Butz, N8PPF

Directors:

Chairman: Frank Counts, KC8EVS

Greg Short, W8DOH

Michael Jacobs, KE8HGE

Don Russell, W8PEN

Barry Butz, N8PPF

Emery Bennett, W8TW

Bill Stroud, KD8WHQ

Newsletter Editor & Facebook Editor:

Bill Bradley, KC8BB

## March Meeting Minutes April 13, 2020



### Opening

The repeater was toned to Net Mode by Net Control N8TI (Louie Wilkinson) at 7:02 PM with 16 members checking in.

### Minutes

The minutes of the previous meeting were accepted as presented in the MVARC Newsletter without objection.

### Treasurer (Terry Windsor KI8N)

The Treasurer's report for March, 2020, was accepted presented without objection. Copies of the monthly report are available from the Treasurer upon request.

### Repeaters (Don Russell W8PEN)

440 MHz repeater is working well. The 2m repeater is having issues again. When it rains, it pops and crackles, the signal fluctuates and the receive signal is not too great. The water tower mesh node was turned off to see if it was creating interference with the 2m repeater, but that does not seem to be the case this time.

In discussing matters with Barry Butz (N8PPF), they are now working on the theory that the antenna system itself may have a leak that is letting moisture in. The hardline connections on both ends were replaced last year. Matt Mitchell (KB8UVN) has sufficient half-inch hardline to run another line from the antenna to the repeater. He also has a DB-224 2m commercial antenna (identical to what we currently have) but it is not currently for sale. What Don proposes for consideration is putting in a backup antenna for the 2m repeater, one that will be completely separate from the existing system. He is looking at a new antenna: Hustler G-6 144b with a current price of \$150.00. The backup would then be used while main system is taken down for examination. He thinks that the matching sections may need to be replaced and he expects the cost for this to be no more than \$200.00 for cable and fittings. If this fails to solve the issue, then the hardline will have to be replaced (to be supplied by Matt Mitchell).

Emery Bennett, (W8TW) proposed a Directors' Meeting to discuss this, as it is an equipment issue. Don Russell (W8PEN) agrees with having a Directors' Meeting on this.

### MESH (Don Russell W8PEN)

Mesh network is continuing to work well. Water tower mesh node is currently off (see the 2m repeater) but due to be turned back on in the near future.

### ARES (Bill Stroud KD8WHQ)

We have not been asked to do anything with Mount Vernon or Knox County. He is monitoring the County and State EOCs, but they have been very quiet. He is continuing to monitor things and will get back to us if something comes up.

### Coming Events

NVIS Day, April 25 (Don Russell W8PEN): 10am - 4pm, operate individually but as a club. Set up your station in your QTH and make as many contacts as you can. Send Don a log of your stations worked, antenna used, and power used. The contest exchange will be your Grid Report (EN80xx for Knox County), your power, and a true-measure signal report. Don will send out an email with additional information. The website for the event is: [www.arrl-ohio.org/sec/nvis.html](http://www.arrl-ohio.org/sec/nvis.html). Once Don has your individual logs, he will consolidate and submit the report for the club.

Those that do not have contact information for Don, can send an email to [info@mvarc.net](mailto:info@mvarc.net) and it will be forwarded on.

Black Fork Gravel Grinder (bicycle event) has been cancelled. We had been approached to provide communication support.

Hamvention has been cancelled.

### Business

Terry Windsor (K18N): The club's equipment and liability insurances will be due in early June. A brief discussion took place over the necessity of club approval to pay these bills. It was decided that these bills are part of the club's on-going operations/routine expenditures and so their payment should be automatic.

### Field Day, June 27-28

Given the COVID-19 situation, things are still a bit up in the air, but planning should still take place. Don Russell, (W8PEN) suggesting having the event, but waive off the picnic. He suggested keeping the 3 stations as-is since they are far enough apart anyway, and limit the stations to operators only, with social distancing being observed and -- if necessary -- the wearing of masks when not operating a station. Don Russell (W8PEN) agreed to help move planning forward. Frank Counts (KC8EVS) agreed to contact Apple Valley about getting Floral Valley reserved for our use, if it is available.

### Friday Morning Breakfasts

are now Friday Morning Breakfast Nets at 10am on the 2m repeater, with the 70cm repeater used as a QSY in the event of multiple conversations.

Don Russell (W8PEN) said that there have been local nets on 10m SSB about every other day. Question was raised about having these nets on the 2m repeater, instead. Barry Butz (N8PPF) suggested the possibility of 6m. Other participants in the net voiced support for changing the net around. Others interested in the net can contact Don Russell (W8PEN) directly or via [info@mvarc.net](mailto:info@mvarc.net).

### Meeting Adjourned

Without objection, the repeater was returned to Normal Amateur Use at 7:49 pm.

Respectfully submitted,

Michael Jacobs, KE8HGE

## Don Russell, W8PEN

Would it be an understatement for me to say that April 2020 was a strange month? Here is hoping May is better. I would imagine we will have another club meeting “over the air” on the K8EEN 2 meter repeater. There should be an announcement elsewhere in this Newsletter.

It will be interesting to see what happens as Ohio starts to open up businesses once again. Will we see an uptick in Coronavirus infections? Or will things start to improve? A lot will depend on us. Social distancing and hand washing are the most important tools we currently have to fight this virus. Lets all continue to do so and get this pandemic behind us.

The easy part is the hand washing. This should actually become a standard practice from here on out. Easy to do and will also help to prevent one from getting the flu, colds, etc. Social distancing is a tougher issue. In our culture, we love being together whether it is at a sporting event, musical event, picnics, etc. For now, we just have to live with it. Maybe we are in for a permanent change socially, but I hope not.



## NVIS Day

One of the first casualties of COVID-19 was NVIS Day. It was an unusual day in that club members did not gather in one group to operate during this event. Instead, four or five club members operated their own stations from home with NVIS antennas. The event itself went well and may indeed have benefited from the social distancing aspect by having more individual stations on the air.

Unfortunately, band conditions were horrible. At home, I had an S9 noise level. I usually have an S3 or less. Many participants complained about high noise level. Plus, the atmospheric D layer absorption seemed to be greater than usual. So, high noise level plus weak signals did not make for a fun day.

Here is a summarized report on club members participating in this event:

### W8PEN, Don

11 Contacts using a quarter wave end fed 80 meter antenna at 10 feet. When comparing this antenna with the stations main 160 meter windom at 45 feet, the end fed was better by an average of one S unit.

### KC8EVS, Frank

8 Contacts using three antennas: a 160 Meter OCD antenna, a Military style NVIS 80/40 meter antenna, and a Dipole antenna at 30 feet. All antennas seemed to work about the same.

### KI8N, Terry

6 Contacts using a dipole antenna.

### N8PPF, Barry

3 Contacts using a G5RV antenna at 30 feet.

As one can see, nobody did particularly well during this event. Hopefully, better conditions will prevail for next years event.

## Field Day

Looks like I will be heading up this years Field Day event. Usually I just let things happen, as we pretty much do the same thing every year. With the COVID-19, things may take a bit more planning. We can continue with the four station plan if we have enough operators. To avoid interference to one another, stations are typically located far apart from each other anyway.

**Radio Activity continues on page 6**

The key will be social distancing at each station. This might require that we schedule operating times at each station per operator and require that each operator does his/her own logging. I think in most instances, the operator prefers to do his own logging anyway.

It might be a good idea to put caution tape out six feet around the perimeter of each station so that visitors cannot violate social distancing. Or simply require visitors to wear masks. Certainly things worth talking about.

Setting up antennas could be problematic, but I think we can handle this easy enough with some caution. We will be outdoors in the open, which should help reduce the risks.

Another idea is to simply have four operators. Each operator would be responsible for their own station and antennas. Then these operators would have the option to invite others to operate their stations, or not. This might be a good option if the club as a whole decides to cancel this years Field Day event. We can still have four stations set up and operate under one call, K8EEN.

I am thinking that we may need to cancel plans for the Field Day picnic and simply let everyone fend for themselves this year.

Unfortunately, these ideas go against the purpose of Field day, which is to demonstrate to the public what ham radio can do.

Of course, by the time Field Day come around, we may not have to worry about any of this. Or worse, we will still have a stay at home order, which may cancel Field Day entirely.

On the bright side, Bobby KE8ANY, has offered to donate a portable canopy to the club. This canopy is smaller than the one she usually provides, but should be suitable for our purposes.

Those interested in participating in Field Day this year are invited to send me their comments or suggestions to [w8pen@arrl.net](mailto:w8pen@arrl.net). Or any of my other email addresses that you may have in your address book. Enough about Field Day for now.

## Repeater Report

The 2 meter repeater continues to have problems when it rains. Sometimes the repeater acts normally and is very good. Sometimes we have some crackling and popping in the audio. Sometimes coverage is down a bit.

The club is planning on replacing the present repeater antenna as soon as practical with the conditions the way they are. If done properly, this should solve our problems once and for all.

The club is also planning on installing a backup 2 meter antenna system so that if we have any problems in the future, we can simply switch antennas while the one is being fixed. This backup antenna system will include its own feed line separate from what we are now using.

While the backup antenna had been decided on, I am having second thoughts. The backup antenna we decided on was a 2 meter only antenna. This antenna provided a DC ground for lightening protection. What I am wondering is, would we be better off with a dual band (2m/70cm) antenna. This would allow us to run a 70cm repeater from this location if it ever became necessary. Or a 70cm base station. Doing so while still maintaining the flexibility of being a backup antenna for the 2 meter repeater.

The club has no plans on putting a permanent 70cm repeater at the water tower, but it would be nice to have an option if we ever needed an extra repeater for some event.

The 70cm repeater at KCH continues to work well. Just not much activity on it. But it is there and operational if and when we need it.

## **Local Mesh**

Our local mesh network continues to work well. Our intentions are to continue its development as discussed in last months Radio Activity column.

**By Barry Butz, N8PPF**

Last month I wrote about the solar panel installation in my camper. This time I will elaborate on some of the details of battery management to get the maximum performance and maximum life from the battery.

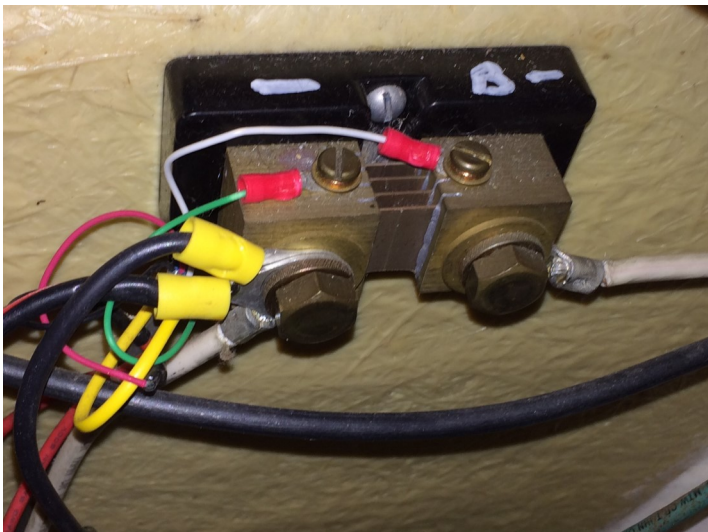
The first step in being kind to your battery is limiting current draw. In an RV there are few opportunities for conservation. Mainly there is the lighting. Consumption adds up when several lights are used for a few evening hours. An average automotive type bulb draws about 1.5 amps. LED replacement bulbs keep improving. They give the same amount of light with about 1/4<sup>th</sup> the current.

It's not easy to judge a battery's state of charge. In the past, specific gravity was a pretty good indicator. With today's sealed batteries it isn't possible. Voltmeters are often used for this function, sometimes being scaled in battery charge. That's only partially successful. If the battery is left in a resting state for 12 hours its voltage can give an indication. For a lead-acid battery these are the numbers:

12.68v = 100%, 12.45v = 75%, 12.24v = 50%, 12.06v = 25%.

In the actual case with a battery in service, it's not easy to leave it at rest. That is the critical flaw.

A better way is to measure the current entering and leaving the battery. This is done by inserting a shunt resistor in one of the wires connected to the battery (in this case the negative). The shunt has very little resistance and has negligible effect on the circuit. But this small resistance develops a voltage proportional to the current flow. That voltage is measured by a monitor that tracks the amp-hours entering and leaving the battery. The monitor is programmed for the amp-hour capacity of the battery and also its charge efficiency, about 80-90%.

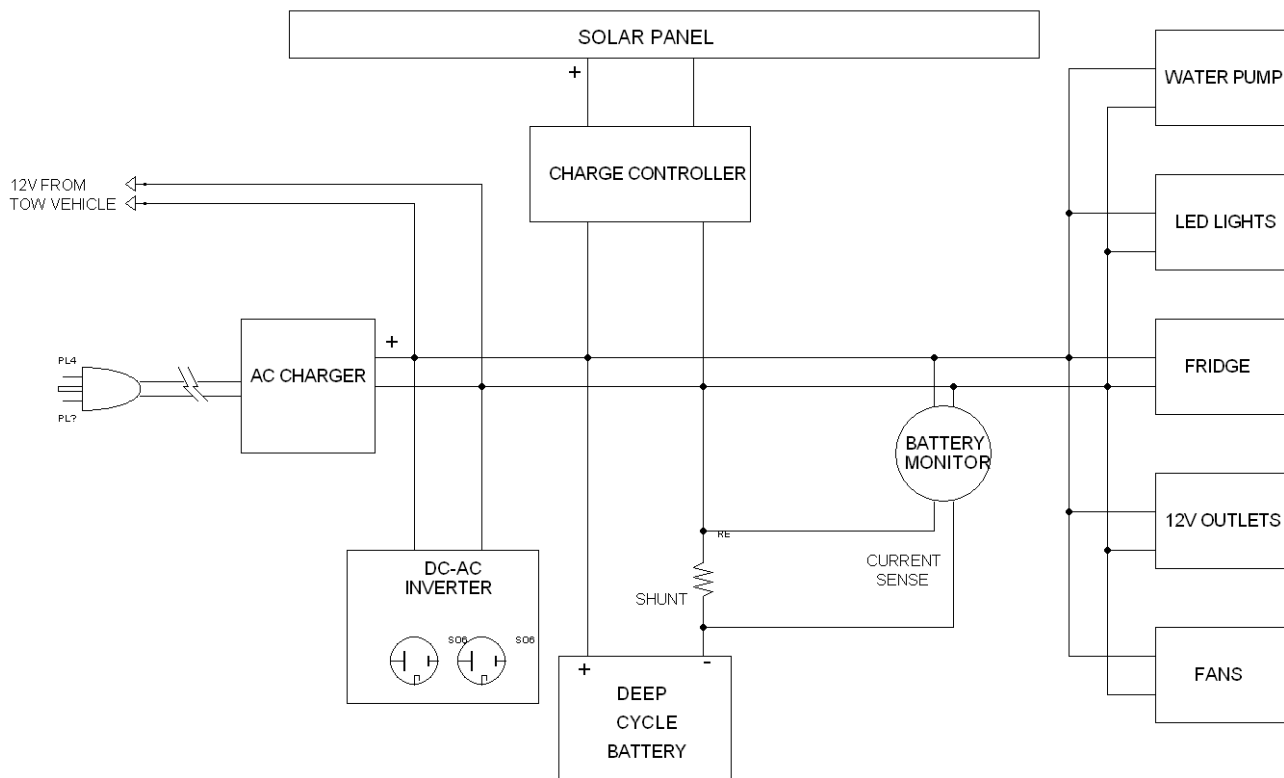


Above is the shunt resistor as installed. The small white and green wires are the sense wires that connect to the battery monitor. The heavy white wire goes to the battery negative and the others are all negatives from various equipment.

The battery monitor shown is usually sold for marine use where shore power is unavailable. It also is suitable for RV installations. I installed it shortly after buying the camper when I realized that I had no idea if the battery was charged enough or possibly overcharged. The display can be selected to show voltage, current, net amp-hours, or percent of charge. The green bars show percent. The display blanks after 10 minutes to save power. When blanked the current is about 20ma.

**Battery Tending continues on page 8**





Title			CASITA DC SYSTEM
Author			N8PPF
File	:\Users\BEB\Documen ... Casita DC System.dsn		Document
Revision	1.0	Date	MAY 6, 2020
Sheets		1 of 1	

Our style of camping doesn't depend on AC hookups. We seldom go to such campgrounds. But we do use quite a few accessories, mostly battery powered.

Here is a block diagram of the entire system. The usual order for charging is as listed.

The battery can be charged several ways - Solar power, 12 volts from the tow vehicle, generator,

AC shore power, or a combination of them. In practice I have found the solar panel suffices for everyday use unless the camper is located in the shade. Then it's time for the generator.

Almost as if going back to civilization, I have installed a true-sine-wave inverter. This is to power sensitive AC equipment such as computers.

12 volts, of course, is available for such important uses as ham radio.

### Good practices for long battery life:

Avoid discharging below 50%. Occasional greater discharge won't hurt but frequent is harmful.

Batteries accept a charge quickly when they are low. The final 20% really slows down. When using a generator, sometimes it is recommended to consider 50-80% the normal operating range. However, a solar panel will operate all day reaching 100% given enough sunshine.

Don't expect batteries to last forever. After just a year or two their capacity could be down by 50%.



# May, 2020

<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>	<i>Sat</i>
<b>3</b> 9:00 pm ARES Sunday Night Net on K8EEN W8PEN, Don	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b> 10:00 am Friday Breakfast Net on K8EEN	<b>9</b>
<b>10</b> 9:00 pm ARES Sunday Night Net on K8EEN NT8I, Louie	<b>11</b> 7:00 pm MVARC Monthly Meeting on K8EEN	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b> 10:00 am Friday Breakfast Net on K8EEN	<b>16</b>
<b>17</b> 9:00 pm ARES Sunday Night Net on K8EEN KE8HGE, Michael	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b> 10:00 am Friday Breakfast Net on K8EEN	<b>23</b>
<b>24</b> 9:00 pm ARES Sunday Night Net on K8EEN W8DOH, Greg	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b> 10:00 am Friday Breakfast Net on K8EEN	<b>30</b>
<b>31</b> 9:00 pm ARES Sunday Night Net on K8EEN W8DOH, Greg	<b>1 June</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b> 10:00 am Friday Breakfast Net on K8EEN	<b>6</b>
<b>7</b> 9:00 pm ARES Sunday Night Net on K8EEN W8PEN, Don	<b>8</b> 7:00 pm MVARC Monthly Meeting on K8EEN	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b> 10:00 am Friday Breakfast Net on K8EEN	<b>13</b>