

# MRAC Hamateur Chatter

The Milwaukee Radio Amateurs Club

June 2016 Volume 24, Issue 6

One of the World's Oldest Continuously Active Radio Amateur Clubs—since 1917

## 6m Awakens

13 June 2016 | by [Steve VE7SL](#)

Well Friday morning's planned 2m EME window got pushed to the side when 6m started to show some interesting propagation possibilities. Several



Europeans had been working slowly westward, past their usual east coast stopping point. When EA8DBM (Alex) in the Canary Islands reported via the [ON4KST 6m chat page](#) that he was hearing a station in Montana, my ears really perked up. At around 10:30 local time, KE7V (Johnny), about 40 miles due south of me in

Washington state, was heard working Alex but I could hear nothing from him at all.

As is often the case between here and KE7V, signals from Europe often move quickly northward and sure enough, about two minutes later, EA8DBM's CW signal appeared at good strength, calling CQ.

I quickly worked Alex, whose signal stayed around for almost an hour, and then began looking for any others that might be riding along on the same path. Sure enough, his neighbor, EA8TL was heard CQ'ing, but much weaker. After a few calls he came back with my report to which I responded several times, but it was evident that he was having difficulty as he kept repeating my report. Unfortunately, and unlike Alex, he soon faded away without me ever hearing the needed 'RR' for my signal report confirmation.



courtesy: <https://www.google.ca/maps/>

About an hour later, a rapidly fading and quickly building signal was heard on CW calling CQ at about 25wpm ... it was CN8KD in Rabat, Morocco!

It's times like this that 6m demonstrates why it's called the 'magic band', as exciting moments like this are so rare on the west coast ... the very thing that keeps us 6m nuts glued to the radio during the summer months.

I called Mohamed several times as his signal built, but his rapid-fire CQ's continued much to my frustration. As his signal peaked to a solid 569, he sent a '?' and then replied with 'VE6?', probably as shocked as I was. After repeating my call several times, he returned once again but this time with 'VE7NL?'. The next several transmissions from him were the same and as the delicate links between our two stations shifted once again, he was gone as quickly as he'd arrived ... close, but no cigar. This was the first 6m signal that I've ever heard from continental Africa since coming on the band in 1970. I wonder if I will ever hear him again.

With a dead 6m band on Saturday morning, I was able to get back on EME (JT65B mode) for my final day of favorable moonrise windows and had a nice surprise when VE1KG in Nova Scotia answered my first CQ, for initial #81 with my small station ...



### MRAC Officers:

#### Terms Expiring in 2016

- President – Dave, KA9WXN
- V-President– Vacant
- Secretary – MBH, KC9CMT
- Treasurer – MBH, KC9CMT

#### Terms Expiring in 2017

- Director – Al, KC9IJJ
- Director – Hal, KB9OZN
- Director – Tom, W9TJP
- Director--Dale, AB9DW

**The Club Phone Number is: (414) 332-MRAC or**

**(414) 332- 6 7 2 2**

Visit our website at:

[www.w9rh.org](http://www.w9rh.org)

Mail correspondence to:

**M. R. A. C.**

**PO Box 26233**

**Milwaukee, WI**

**53226-0233**

Board of directors meeting called to order at 7:06 pm by Dave Shank, KA9WXN club president.

Director's present: Michael KC9CMT, Dave KA9WXN, Hal KB9OZN, Tom W9TJP, Dale, AB9DW.

Absent: Al, KC9IJJ, Dan, N9ASA.

**Preliminary Discussion:** The Treasurers report for March/April 2016 was presented by Michael, KC9CMT. The treasurers report was approved as read by KC9CMT, a motion to accept was made by Tom, W9TJP, seconded by Hal, KB9OZN. The April balance ended with \$20,079.74 in Club accounts. New member certificates will be mailed if not handed out when they become available. Club dues increased to \$20 per year effective April 1<sup>st</sup>, 2016.

**Meeting programs:** The May meeting will be the annual auction as in past years. The June meeting will be after Field Day this year so the program presentation will be a field day wrap up. There will be no meetings during July and August again this year. The church has been advised of all our meeting dates for 2016, clearing any confusion.

**Field Day:** The board has discussed moving our Field day to the MATC South Campus. A tentative approval has been given by the dean of MATC South Campus, but we are having problems getting a final approval from MATC. MATC has a radio club that could be involved. As of May 25, it has not completely been decided. The board would like to have a working committee for the field day 2017 effort. The board has tentatively approved spending \$200 for access to a relatively secure area.

### Special Project Committees & Committee reports:

**Repeater Report:** The club would like more than one repeater control operator. A club repeater control operator should be a extra class operator to have the kind of privileges that are necessary to operate field day to its fullest extent.

**New Business:** Dave, KA9WXN has continued discussions on events for the club's 2017, 100<sup>th</sup> anniversary. Discussions have been going in the direction of having a Friday night banquet March 31<sup>st</sup>, and then the AES SuperFest on Saturday, April 1<sup>st</sup>. The club wants to ramp up the dissemination of information on our Yahoo group. When there are announcements, they should be posted to our Yahoo group. MakersFaire this year is September 23<sup>rd</sup> & 24<sup>th</sup>, the club will have a presence there as we did last year. We will be requesting more space than last year. The club should really have a committee to work on this project.

**We need to start planning special event stations for the entire year of 2017.** Dave, KA9WXN will attempt to generate interest among the membership in forming a committee to handle planning. The board does want to go ahead with planning a banquet during the 100<sup>th</sup> anniversary year. Time and place to be determined.

**Swapfest Committee:** Photos should be taken of all club activities and uploaded to the club Facebook page and copied to the newsletter editor for insertion into the paper. We will continue to use the Google spreadsheet for the 2018 swapfest. The date and venue of the 2018 swapfest is still being discussed.

There are a number of places and dates being considered. The tailgate swapfest May 21, the same weekend as Dayton, at AES, was small but okay according to AES. We need to attract more sellers for this event if we have one again in the future.

**Special Projects:** The club really needs PR and recruitment, business cards have been printed and will be handed out at all personal activities. Joe, N9UX took part in another balloon launch the first week of May, 2016. The board of director's has entered discussions regarding the logistics of having a banquet that would be the day before or during AES SuperFest. The club could send out invitations for the banquet.

**Work needs to start on the 100<sup>th</sup> anniversary celebration that falls in 2017.** The club wants a special event callsign to use during the 100<sup>th</sup> year events. Dave WB9BWP the club trustee would have to request the callsign from the FCC. The club would also like to have a membership drive for new members for 2017. There would be a special certificate for the any new member of the club, or a cash/equipment award. There could also be an award for anyone in the club that attracts a certain number of new members. This is still being discussed. The club should have some special QSL cards printed up for contacts during the calendar year of 2017. The club would like to query members about working on projects for the 100<sup>th</sup> anniversary. The club is interested in having meetings in various area parks during July and August when we do not meet formally. Dave, KA9WXN will ask if anyone is interested in coordinating that idea.

**Website update:** Some club members have been using our PayPal account to renew their dues. The club also has a Wiki page. Dave, WB9BWP will be working on the Wiki page. Tiff has been helping Dave, KA9WXN to build the website.

Clubs throughout the country need to use the spectrum that they have been given. The 220mhz band is not used very often in the Milwaukee area. A Club calendar is a project that the Board of Directors' would like to pursue. Dave, KA9WXN has been working on this idea. A schedule of upcoming events should be printed in the chatter each month.

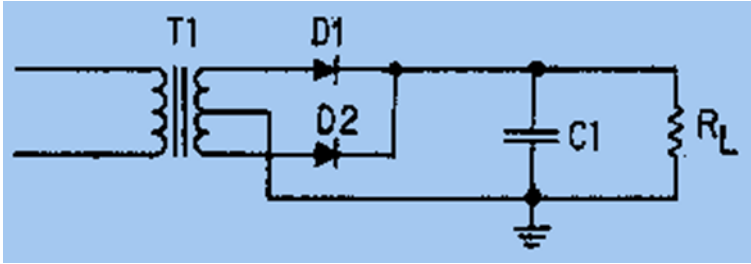
A motion was made to adjourn the meeting at 8:14 pm by Tom W9TJP, seconded by Dale AB9DW, Meeting adjourned at 8:16 pm.

The Library room will be returned to an orderly condition as it was when we arrived.

### The Capacitor Filter

The simple capacitor filter is the most basic type of power supply filter. The application of the simple capacitor filter is very limited. It is sometimes used on extremely high-voltage, low-current power supplies for cathode-ray and similar electron tubes, which require very little load current from the supply. The capacitor filter is also used where the power-supply ripple frequency is not critical; this frequency can be relatively high. The capacitor (C1) shown in figure 4-15 is a simple filter connected across the output of the rectifier in parallel with the load.

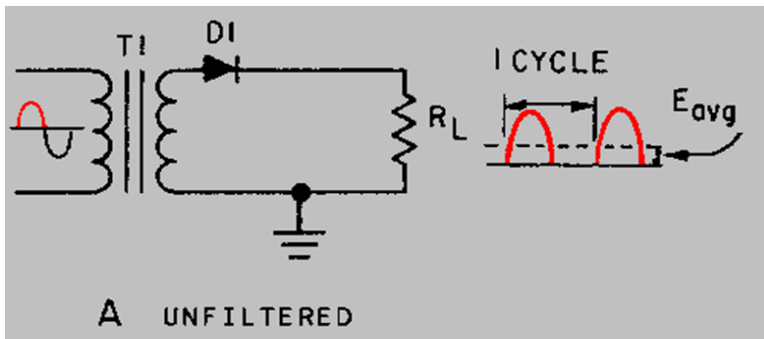
Figure 4-15. - Full-wave rectifier with a capacitor filter.



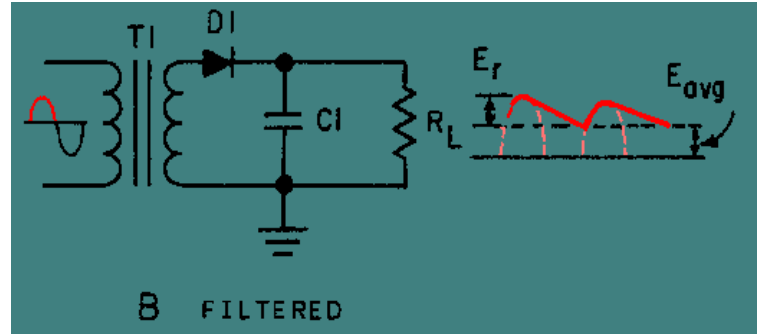
When this filter is used, the RC charge time of the filter capacitor (C1) must be short and the RC discharge time must be long to eliminate ripple action. In other words, the capacitor must charge up fast, preferably with no discharge at all. Better filtering also results when the input frequency is high; therefore, the full-wave rectifier output is easier to filter than that of the half-wave rectifier because of its higher frequency.

For you to have a better understanding of the effect that filtering has on  $E_{avg}$ , a comparison of a rectifier circuit with a filter and one without a filter is illustrated in views A and B of figure 4-16. The output waveforms in figure 4-16 represent the unfiltered and filtered outputs of the half-wave rectifier circuit. Current pulses flow through the load resistance ( $R_L$ ) each time a diode conducts. The dashed line indicates the average value of output voltage. For the half-wave rectifier,  $E_{avg}$  is less than half (or approximately 0.318) of the peak output voltage. This value is still much less than that of the applied voltage. With no capacitor connected across the output of the rectifier circuit, the waveform in view A has a large pulsating component (ripple) compared with the average or dc component. When a capacitor is connected across the output (view B), the average value of output voltage ( $E_{avg}$ ) is increased due to the filtering action of capacitor C1.

Figure 4-16A. - Half-wave rectifier with and without filtering. UNFILTERED



### FILTERED



The value of the capacitor is fairly large (several microfarads), thus it presents a relatively low reactance to the pulsating current and it stores a substantial charge. The rate of charge for the capacitor is limited only by the resistance of the conducting diode which is relatively low. Therefore, the RC charge time of the circuit is relatively short. As a result, when the pulsating voltage is first applied to the circuit, the capacitor charges rapidly and almost reaches the peak value of the rectified voltage within the first few cycles. The capacitor attempts to charge to the peak value of the rectified voltage anytime a diode is conducting, and tends to retain its charge when the rectifier output falls to zero. (The capacitor cannot discharge immediately.) The capacitor slowly discharges through the load resistance ( $R_L$ ) during the time the rectifier is nonconducting.

The rate of discharge of the capacitor is determined by the value of capacitance and the value of the load resistance. If the capacitance and load-resistance values are large, the RC discharge time for the circuit is relatively long. A comparison of the waveforms shown in figure 4-16 (view A and view B) illustrates that the addition of C1 to the circuit results in an increase in the average of the output voltage ( $E_{avg}$ ) and a reduction in the amplitude of the ripple component ( $E_r$ ) which is normally present across the load resistance.

Now, let's consider a complete cycle of operation using a half-wave rectifier, a capacitive filter (C1), and a load resistor ( $R_L$ ). As shown in view A of figure 4-17, the capacitive filter (C1) is assumed to be large enough to ensure a small reactance to the pulsating rectified current. The resistance of  $R_L$  is assumed to be much greater than the reactance of C1 at the input frequency. When the circuit is energized, the diode conducts on the positive half cycle and current flows through the circuit, allowing C1 to charge. C1 will charge to approximately the peak value of the input voltage. (The charge is less than the peak value because of the voltage drop across the diode (D1)). In view A of the figure, the charge on C1 is indicated by the heavy solid line on the waveform. As illustrated in view B, the diode cannot conduct on the negative half cycle because the anode of D1 is negative with respect to the cathode. During this interval, C1 discharges through the load resistor ( $R_L$ ). The discharge of C1 produces the downward slope as indicated by the solid line on the waveform in view B. In contrast to the abrupt fall of the applied ac voltage from peak value to zero, the voltage across C1 (and thus across  $R_L$ ) during the discharge period gradually decreases until the time of the next half cycle of rectifier operation. Keep in mind that for good filtering, the filter capacitor should charge up as fast as possible and discharge as little as possible.

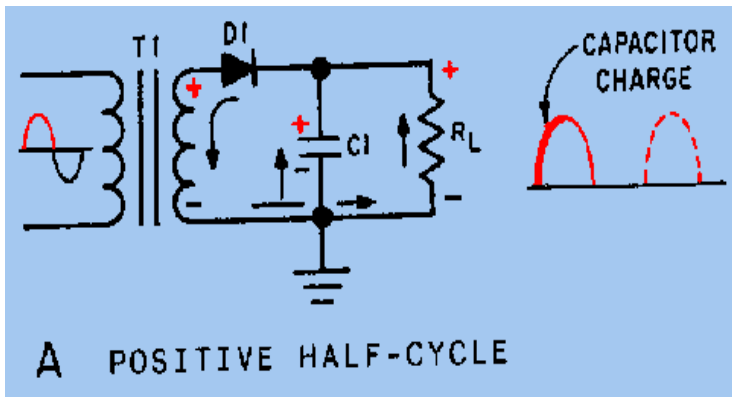


Figure 4-17A. - Capacitor filter circuit (positive and negative half cycles). POSITIVE HALF-CYCLE

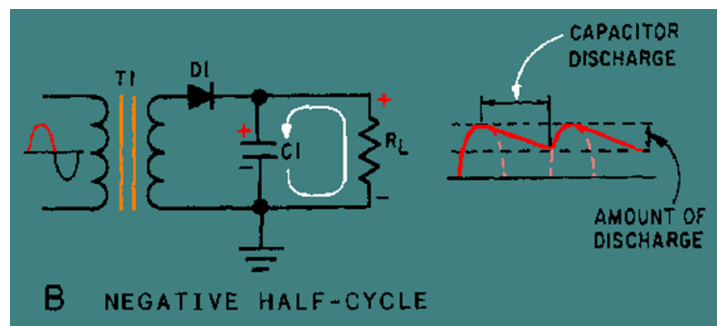


Figure 4-17B. - Capacitor filter circuit (positive and negative half cycles). NEGATIVE HALF-CYCLE

Since practical values of  $C_1$  and  $R_L$  ensure a more or less gradual decrease of the discharge voltage, a substantial charge remains on the capacitor at the time of the next half cycle of operation. As a result, no current can flow through the diode until the rising ac input voltage at the anode of the diode exceeds the voltage on the charge remaining on  $C_1$ . The charge on  $C_1$  is the cathode potential of the diode. When the potential on the anode exceeds the potential on the cathode (the charge on  $C_1$ ), the diode again conducts, and  $C_1$  begins to charge to approximately the peak value of the applied voltage.

After the capacitor has charged to its peak value, the diode will cut off and the capacitor will start to discharge. Since the fall of the ac input voltage on the anode is considerably more rapid than the decrease on the capacitor voltage, the cathode quickly become more positive than the anode, and the diode ceases to conduct.

Operation of the simple capacitor filter using a full-wave rectifier is basically the same as that discussed for the half-wave rectifier. Referring to figure 4-18, you should notice that because one of the diodes is always conducting on either alternation, the filter capacitor charges and discharges during each half cycle. (Note that each diode conducts only for that portion of time when the peak secondary voltage is greater than the charge across the capacitor.)

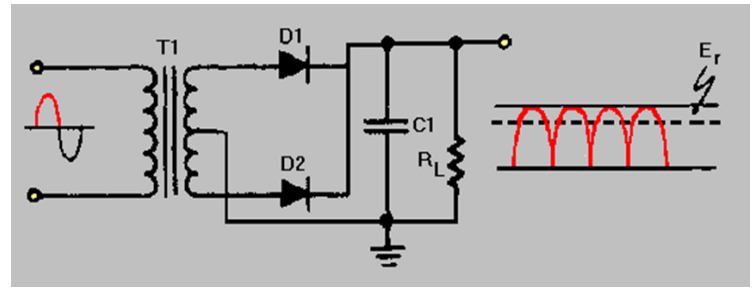


Figure 4-18. - Full-wave rectifier (with capacitor filter).

Another thing to keep in mind is that the ripple component ( $E_r$ ) of the output voltage is an ac voltage and the average output voltage ( $E_{avg}$ ) is the dc component of the output. Since the filter capacitor offers a relatively low impedance to ac, the majority of the ac component flows through the filter capacitor. The ac component is therefore bypassed (shunted) around the load resistance, and the entire dc component (or  $E_{avg}$ ) flows through the load resistance. This statement can be clarified by using the formula for  $X_C$  in a half-wave and full-wave rectifier. First, you must establish some values for the circuit.

## HALFWAVE RECTIFIER

FREQUENCY AT  
RECTIFIER OUTPUT: 60 Hz

VALUE OF FILTER  
CAPACITOR: 30 $\mu$ F

LOAD RESISTANCE: 10k $\Omega$

$$X_C = \frac{1}{2\pi fC}$$

$$X_C = \frac{.159}{fC}$$

$$X_C = \frac{.159}{60 \times .000030}$$

$$X_C = \frac{.159}{.0018}$$

$$X_C = 88.3\Omega$$



## Weather Awareness

FREQUENCY AT  
RECTIFIER OUTPUT: 120Hz

VALUE OF FILTER  
CAPACITOR: 30μF

LOAD RESISTANCE: 10kΩ

$$X_c = \frac{1}{2\pi fC}$$

$$X_c = \frac{.159}{fC}$$

$$X_c = \frac{.159}{120 \times .000030}$$

$$X_c = \frac{.159}{.0036}$$

$$X_c = 44.16\Omega$$

As you can calculate the the rectifier, you reduce the impedance of the capacitor by one-half. This allows the ac component to pass through the capacitor more easily. As a result, a full-wave rectifier output is much easier to filter than that of a half-wave rectifier. Remember, the smaller the  $X_c$  of the filter capacitor with respect to the load resistance, the better the filtering action. Since

see from the tions, by doubling frequency of

$$X_c = \frac{1}{2\pi fC}$$

the largest possible capacitor will provide the best filtering. Remember, also, that the load resistance is an important consideration. If load resistance is made small, the load current increases, and the average value of output voltage ( $E_{avg}$ ) decreases. The RC discharge time constant is a direct function of the value of the load resistance; therefore, the rate of capacitor voltage discharge is a direct function of the current through the load. The greater the load current, the more rapid the discharge of the capacitor, and the lower the average value of output voltage. For this reason, the simple capacitive filter is seldom used with rectifier circuits that must supply a relatively large load current. Using the simple capacitive filter in conjunction with a full-wave or bridge rectifier provides improved filtering because the increased ripple frequency decreases the capacitive reactance of the filter capacitor.

## Tornado rips across La Crosse city's South Side

By Tribune staff May 22, 2011



A tornado ripped through La Crosse's South Side on Sunday May 11, 2011, leaving a wake of leveled buildings, downed power lines and debris that stretched nearly halfway across the city. The storm downed trees and wreaked havoc along a 1.5-mile stretch along a four-block wide path. The worst damage was along Green Bay and Redfield streets, where treetops were shorn, roofs and siding torn off houses and debris left hanging from tree limbs and power lines.

At least 200 homes and businesses were damaged, according to La Crosse County Emergency Management, including Bakalars Sausage Co., the Green Island Ice Arena, Kmart, the Pepsi-Cola Bottling building and Badger Corrugating. La Crosse Mayor Matt Harter has declared a state of emergency in the wake of the late afternoon tornado that leveled buildings, downed power lines and destroyed homes.

Officials have lifted a mandatory evacuation of a 15-block area near Gunderson Lutheran hospital after confirming there is no gas leak, but police and firefighters are still combing South Side neighborhoods searching for injured residents. Police are still asking residents across the city to stay indoors. Traffic is hindering emergency responders' efforts to deal with people who may be injured or trapped inside damaged buildings.

"As tempting as it maybe, we are strongly urging the public to STAY AWAY from these areas whether by foot or vehicle to make it easier for emergency personnel to perform their duties," according to a statement issued by police.

Bakalars Brothers Co. has been damaged, and nearby structures are destroyed. The roof was torn off the River Park Apartments at Cook and Seventh. The Green Island ice arena is damaged.

The roof of the K-mart building was damaged and partially collapsed. Other businesses damaged include the Pepsi Bottling building and Badger Corrugating.

Rescue crews are directing displaced to Central High School, and the local Red Cross chapter is setting up a response center at Lincoln Middle School. Firefighters and police are sweeping the city neighborhood by neighborhood, searching for injured residents. Crews from nearby communities are assisting. Fire department staff members say rescue crews are also being dispatched on the river, where there are reports of a missing boat and two Jet Skis

Reports are coming in from across the city about roofs ripped entirely off some buildings. Others have been severely damaged.

So far, there are no reports of serious injuries or deaths. Every firefighter and police officer in the city has been called into work.

The storm left a wake of destruction mostly across the South Side near Gundersen Lutheran Medical Center. The hospital was not damaged, and its emergency room is not treating anyone seriously hurt in the storm, according to hospital officials.

"It's early yet, but I think at this point we're all praying no one is hurt or worse," Gundersen spokesman Chris Stauffer said. Other homes just a few blocks away were untouched. Somehow, in all the devastation, a miracle: no one was seriously hurt. "God was looking out for a lot of people," La Crosse Police Chief Ed Kondracki said.

The tornado struck at about 4:30 p.m. Mayor Matt Harter declared a state of emergency Sunday evening. Emergency crews met the destruction with every available firefighter and police officer, plus a strong response from surrounding departments. "We'll take as much as we can get for at least the next 24 hours," Kondracki said. Police and firefighters went door to door searching for injured or trapped residents. Officials were still trying to determine Sunday night how many people had been displaced.

A 15-block area near Gundersen Lutheran Medical Center was under an evacuation order late Sunday. Mark Roth, who lives at 1230 Park St., said he saw debris sailing through the air. "Everything was swirling," he said. His neighbor, Tina Ellis, said the lights flickered, she saw things flying and took her daughter and nephew to the basement. "This is like what you see on TV," she said standing on her porch as rain continued to pelt the house. Debbie Hunnicutt and her daughter had just arrived home when the storm hit. Her daughter made it into the house on Green Bay Street. Hunnicutt saw trees falling and took cover in the garage.

"I felt my garage shake," she said. Officer Tony LeQue waited in Houska Park for the tornado after a warning from dispatch. He witnessed a funnel cloud scoot across Target Lake and kick up debris as it moved northeast toward South La Crosse. "To me, it looked big," he said. "It got my heart rate up. I've never seen anything like it." Throngs of displaced residents, sightseers and homeowners surveying damage crowded the debris-covered streets in the aftermath. South Side residents, who sought shelter in bathrooms and basements, emerged from their homes to sunshine and an eerie calm. "Oh my God." "There's Tasha's swing set in the middle of the alley." "I can't believe it." "Whose mailbox is that?" Aaron Holton huddled in his bathtub with his wife and three young children at 1233 Green Bay St. when sirens sounded. When they emerged minutes later, half of their roof was gone. A stoplight from Green Bay and West Avenue came to rest in their front lawn. Siding for Badger Corrugating Co. wrapped around their front yard tree.

"Trees that were growing for 40 years are gone," Holton said. "We'll have to move." Despite the destruction, some streets took on a social atmosphere, with neighbors helping each other begin the cleanup.

But some police resources had to be diverted to corral sightseers who poured into the area to survey the damage. Ron Kale talked on his cellphone as his son snapped photos of the damage to his Green Bay Street home. "Yeah, everybody's fine," Kale said. "Nobody got hurt, but about a quarter of my roof is gone." Kale said he heard the warning siren and was about to close his front windows when they shattered. "We're all lucky," he said.

"I finally heard the freight train sound," said Tom Genz of 1604 East Ave. His home escaped damage, though a piece of siding rested in the upper branches of his spruce tree.

On 26th Street, south of Farnam Street, John Honeck Sr. picked up chunks of yellow insulation from the Kmart roof and other debris from his yard. A narrow section of his roof had been torn off, a beam supporting a roof extension on front of his house had been knocked off and the outer pane of two windows were broken. Honeck got off easy compared with a couple neighbors. Just to the north, Dan Zanter found his mailbox inside his van, blown through a rear-side window. A tree from a home across the street had fallen into his yard and one of his own trees had fallen on his house. A platoon of people, maybe half a dozen armed with chain saws, helped him remove the trees and debris, including his wife's ex-husband and his family. The storm narrowly missed Gundersen Lutheran Medical Center, where the power went out temporarily but no major damage was reported.

The National Weather Service will survey the damage to make an official determination on the strength of the storm. As of late Sunday night, meteorologists had not officially ruled it a tornado.

Name of Net, Frequency, Local Time	Net Manager
<b><u>Badger Weather Net (BWN)</u></b> 3984 kHz, 0500	<a href="#"><u>W9IXG</u></a>
<b><u>Badger Emergency Net (BEN)</u></b> 3985 kHz, 1200	<a href="#"><u>NX9K</u></a>
<b><u>Wisconsin Side Band Net (WSBN)</u></b> 3985 or 3982.5 kHz, 1700	<a href="#"><u>KB9KEG</u></a>
<b><u>Wisconsin Novice Net (WNN)</u></b> 3555 kHz, 1800	<a href="#"><u>KB9ROB</u></a>
<b><u>Wisconsin Slow Speed Net (WSSN)</u></b> 3555 kHz, Sn, T, Th, F, 1830	<a href="#"><u>NIKSN</u></a>
<b><u>Wisconsin Intrastate Net - Early (WIN-E)</u></b> 3555 kHz, 1900	<a href="#"><u>WB9ICH</u></a>
<b><u>Wisconsin Intrastate Net - Late (WIN-L)</u></b> 3555 kHz, 2200	<a href="#"><u>W9RTP</u></a>
<b><u>ARES/RACES Net</u></b> 3967.0 kHz, 0800 Sunday	<a href="#"><u>WB9WKO</u></a>
* Net Control Operator needed. Contact Net Manager for information.	

## **Mole City- A Perspective**

By -Ron Leonard

Since Thanksgiving 1968 our whole AO of III Corp. had started seeing enemy activity on a slowly escalating scale. The doldrums of TET were over. Charlie seems to have his wounds licked and healed from the ass kicking he endured during the TET offensive. From his Cambodian sanctuaries another round of attacks are about to begin.

For weeks the tenseness in the air had been building and could be cut with a knife. Charlie had refused to commit large numbers of troops to the fight, just an ambush here and there mostly of platoon-sized action. This was aggravating the higher ups at Division and in Washington D.C. The body counts were slipping and something had to be done. With this in mind they developed a new strategy "The Patrol Base".

The principal of the "Patrol Base" was to establish a very small Fire Support Base right under the VC and the NVA's nose. To this end, "Patrol Base Mole City" would be the first in a series of these bait and trap operations.

"Mole City" was located in an area that had been untouched by allied ground forces in over a year. The area straddled one of the busiest infiltration routes from Cambodia in all of III Corp. This route serviced the NVA with men, equipment, and supplies that would operate on the III Corp, Saigon, and War Zone C battlefields.

It was tiny, barely 100 yards across in any direction. Circular in nature and positioned but a couple of clicks from the Cambodian border it would prove to be the ultimate lure. It would have a defending force of 500 men made up of three companies of the 4/9th "Manchu's of the 25th Infantry Division.

On the morning of 18 December 1968 the men of Manchu began the task of preparing this tiny oasis 9 1/2 miles south of Tay Ninh City into a fortified position nick named "Mole City". In a single day Company A. of the 25th Infantry Divisions 65th engineers transformed 186,000 pounds of building material hauled in by 27 sorties of CH-47 helicopters into a well fortified position. The engineers with the use of bulldozers constructed the perimeter berm, and the men of Manchu would dig the bunkers spaced 20 yards apart linked together like a giant spider web with deep connecting trenches to act as fighting positions. The bunkers consisted of deep holes covered with PCP steel and a layer or two of sandbags on top to shield any direct hits from mortar, rocket, and RPG rounds. A prefabricated guard tower was flown in to cap off the construction effort. Needless to say there was a sense of urgency.

By nightfall of 22 December 1968 the concertina wire had been strung, the claymore mines set, personnel sensors were positioned in the tree lines, fields of fire established, listening posts had been dispatched to the northeast and southwest, and the artillery had set their coordinates on the tree lines. They were ready. These brave men had no idea what would soon be in store for them.

The Manchu's themselves had endured a hard month. A few days before Thanksgiving they had lost two-thirds of their experienced troopers in one all night firefight south of Trang Bang. The units were now made up of new replacements with no prior combat experience, virgins to combat, and a few seasoned veterans. It would prove to be for many their last night on this earth.

This sets the stage for the unraveling of events that will be forever etched on my brain. This battle would prove costly for the NVA/VC (North Vietnamese Army/Viet Cong). It was also very costly for the heroic men of Manchu and many more. They would still be paying for this battle 34 years later.

In the "Diamondhead" scramble shack you could sense something big was up. No one was saying anything, but with the rumblings in the company area, the franticness of the maintenance crews in the hanger trying to get another fire team flyable. When our flare ship and our sister company Little Bear's counter mortar ship were put on three-minute standby at 6 P.M. you knew. We had all seen it before.

At 11 P.M. in the "Little Bear" ready room the "Counter Mortar Crew", which was made up of the aircraft crew chief and gunner, the artillery "Forward Observer"(FO), the "Aircraft Commander (AC) CWO Mitch Wilhelm and the co-pilot (PP) WO Ed Rodgers had just settled down to go to sleep, when a messenger burst through the door stating in an urgent voice, "let's go you guys, you have a mission." The gunner and crew chief were already on their way to the aircraft to make it ready for take off along with AC CWO Mitch Wilhelm and the (FO). The (PP) WO Ed Rodgers was hurriedly writing down the mission coordinates, artillery information, and radio call signs of the ground commander.

As WO Ed Rodgers approached the aircraft the engine was already at 6600 RPM, the guns were mounted and the crew was on board and ready to go. In moments they were headed southwest towards a rendezvous with "Hell".

We in the Diamondhead "Scramble Shack" were doing our usual thing, some were watching the 11:30 TV program "Gun Smoke" and still trying to figure out if Matt Dillon flinches when he draws his gun in the opening scene of the program. Some of the crewmembers were playing cards, and the gunners were asleep, all of us waiting for the phone to ring. The signal the mission had started. It was a long restless night. At 0020 the phone rang. We all sprang into action and raced to the ships. The last pilot CWO Greg Bucy answered the telephone and got the radio frequencies of the ground commander and coordinates of the mission.

As I got to the ship I untied its blade, gave the clear signal and the pilot hit the starter. You could hear the whining of the turbine as it started spinning. You could hear the Tic! Tic! Of the igniters searching for fuel and the Whoosh of its ignition. As the RPM's increased you could hear the methodical singing of the blades as they gained momentum searching for 6600 RPM. The gunners and crew chiefs are mounting the guns, and getting into their protective chicken plates. CWO Bucy finally arrived with the mission information and gets in and buckles up in his seat. It is time to Rock and Roll.

"Cu Chi Tower, Cu Chi Tower this is Diamondhead Light Fire Team on "The Beach" (Our designated portion of the flight line) "Scramble", the Fire Team leader CWO Hayne Moore broadcasts. "We are enroute Hoc Mon". "Be advised Diamondhead of heavy arty in the area" breaks in the tower. "You are clear to the south. Contact Hoc Mon Arty for approach to the area". Moments later we hovered out of the protective revetment and head south down the runway, the heavily loaded gun ships, frantically clawing at the air for translational lift. Soon we were on the way into the cool night. The lights of Cu Chi slowly fading away as we steadily gain altitude up to 1500 feet and level off. It should be but a short flight of 15 minutes to Mole City.



As the gunships cut through the darkness, the rhythmic popping of the blades gave the night a feeling of tranquility. This tranquility would be shattered moments later. As we approached the Oriental River just south of Go Dau Ha, still three to five clicks south of our objective an NVA .51 caliber anti aircraft gun opened up on the lead gunship. We had positioned ourselves slightly behind and to the north of the lead ship, so we had a front row seat. As the tracers ascended towards the lead ship they appeared to curve towards them, like chains of orange Christmas tree lights. Over the radio came a transmission "Taking fire, taking fire". CWO Larry King my (AC) instinctively had WO Roy Thomas (PP) reach up and pull the navigation light circuit breaker and go blacked out. We immediately rolled in and attacked the NVA .51 cal below with several sets of rockets and the door guns as the lead ship broke hard to the right to avoid the anti-aircraft fire from below they also killed the navigation lights and went blacked out. This one pass seemed to silence the .51 so both ships still blacked out head back to the river.

"Diamondhead 20, this is Diamondhead 10", CWO Hayne Moore broadcasts, "go Diamondhead 10" CWO Larry Little replies. "We are at 1500 feet and are going to go steady dim on the nav. lights. Suggest you stay blacked out and below us", "Roger that Diamondhead 10".

In the distance you could already see the eerie glow of the parachute flares fired by Artillery howitzers somewhere in the Vietnamese night, and the occasional ricochet of a .51 cal tracer high into the night sky. I thought to myself, "damn not them 51's again. I hate those things." If you got hit in the chicken plate it wouldn't even slow it down. It would make a thumb size hole going in and take out the whole back of your chicken plate exiting. If you got hit in the hand it could just rip off your whole arm.

As we got closer CWO Hayne Moore was back on the radio contacting the ground commander. "Recast Uniform one four, this is Diamondhead 10 Light fire Team, please advise situation", our ETA is five minutes. "Roger Diamondhead 10. We are getting the shit kicked out of us. We are surrounded and I don't know how many there are but they are everywhere, and we are in danger of being over run. We have enemy in the wire and on the north/east sides they are in the open. We are taking recoilless rifle fire along with RPG and automatic weapons. Be advised we have two LP's (Listening Posts) out one to the southeast about 200 yards in the tree line, and one to the northeast about the same." "Roger Recast Uniform one four". As we neared station, we could make out the automatic weapons fire. It was ferocious, red tracers going out, white and green tracers going in towards the perimeter, and the occasional streak of an RPG seeking out a bunker and it's occupants.

The night was hazy with all the smoke and dust in the air from impacting ordinance of the friendly artillery and rockets and mortars from the NVA. The glow from the flares made it a surrealistic vision.

As we orbited the battlefield, the fire Team leader "CWO Hayne Moore" tried to quickly assess the situation on the ground, and to formulate an impromptu plan of attack. The entire perimeter was under siege, and it was paramount to assist the hardest hit portions as soon as possible. It was decided to split the fire team Diamondhead 10 would work the north side of the perimeter, and Diamondhead 20 would work over to the west and south sides. As we started our first run,

and we started down and punched off one set of rockets, here came the damn .51's. They looked like orange basketballs and they just whizzed by inches from their mark. I thought, "that was way to close". My gunner and I hosed the position the best we could with the M-60 machine guns leaning out the doors and made a mental note of the location. As we broke right we were over the open area too the north and there were so many NVA soldiers it looked like a bunch of ants attacking a picnic. I don't care where I shot the M-60 I couldn't miss. There were too many of them. As we circled around and made another pass we expended all of our rockets, mini-gun ammo and 2000 rounds of M-60 door gun ammo from each gun in the open area. The M-60's were so hot they glowed cherry red and had a translucency too them You could see the bullets going down the barrel.

"Recast Uniform one four, this is Diamondhead 20. We are fully expended and headed to rearm, we will be back ASAP". "Roger Diamondhead 20, just make it fast". With that transmission made, we nursed all the speed we could get out of the old Huey. The blades flailing at the air to get all the speed it could muster from the old girl, the deafening whine of the engine, and the whop, whop, whop of the blades shattered the night as we hurriedly flew toward the re-arm point at Tay Ninh since it was closer than Cu Chi. Fuel could wait for later. "Tay Ninh Tower, Tay Ninh Tower this is Diamondhead 20. After a short pause Tay Ninh Tower replies, "Roger Diamondhead 20, go" "We need clearance to the Tay Ninh re-arm point direct, ETA five minutes". "Roger Diamondhead 20 you are clear direct". In the distance I could make out the lights of Tay Ninh City. Just to the north would be the base camp. The air was cool and soothing as it rushed by the open doors, my nerves were rattled and for the first time I noticed I was drenched in sweat. The combination of the heat of battle, fear, and adrenaline had caused it. I, for a few moments as the adrenaline subsided could recollect what had just happened. This was the most intense battle of MY war. To say I wasn't scared would be futile, and a lie. The tracers had come up so fast and so often at times I had been afraid to breathe for fear of inhaling one. I thought to myself, I don't know if we will get out of this one, this is bad. Then I thought about the grunts on the ground. I wouldn't trade with them for a million dollars. Whatever I had seen from above was ten fold worse down there in the trenches. Somehow the thought of their plight made my situation acceptable. It was our job to get the grunts out of this, to see them through. They were our grunts. They were our sole purpose of living. We could never let them down.

As we were inbound to the re-arm point I noticed the Little Bear Counter Mortar ship had just finished refueling, lifted off and hovered over to the headquarters pad near the Division como bunker. The engine had remained at flight idle, the crew had stayed on board except for CWO Wilhelm the AC who had went inside.

As we landed and shed our helmets and protective equipment there was a sense of urgency to complete the re-arming as quickly as possible. The Manchu's needed us desperately and we knew it. The pilots and crew chiefs humped rockets and loaded them into their launchers while the gunners re-armed the mini-guns and door guns. Moments later our wing ship appeared out of the south and landed next to us in the re-arm point. They to would go through the same ritual of rearming as we did. Little did we know, that this ballet would be played out over and over for the next seven



hours non-stop. The Little Bear counter Mortar ship also joined us, hovering over from the Division como bunker

CWO Hayne Moore and CWO Larry King the Diamondhead 10 and Diamondhead 20 AC's, along with CWO Mitch Wilhelm the Little Bear AC assembled near the lister bag of drinking water that was at the re-arm point to map out the best way to support the Manchu's, and develop a plan to protect the Little Bear ship on this upcoming mission.

The briefing in the como bunker was for an emergency resupply of ammunition, which was being loaded by the re-arm point personnel. If we didn't get it to the Manchu's quickly they would be out of ammo and over run, which would mean hundreds of deaths. There was no possibility of putting additional troops in before daylight, so CWO Wilhelm talked to his crew, and understanding the dilemma and danger involved they all volunteered to make the ammo resupply

After kicking several scenarios around they decided to stack the ammo in a pyramid in both doors. The re-supply would be a challenge, since "Mole City" was laden with obstacles. There was a tall radio antenna and an observation tower near the center of the compound where the drop zone was to be concerned with, not to mention they would be going into the center of a blazing fire fight which would make it prohibitive to land so they would just come to a hover and kick the ammo out the door. This plan also created a problem; they were two men short to off-load the ammo. The gunner and crew chief needed to man the guns for self-defense.

Two young troopers from the re-arm point were busily loading the last of the ammo, when CWO Wilhelm walked up to talk to them. He asked them if they would mind going along to kick out the boxes when we got where we were going. Neither one had been in a helicopter before nor did they know anything about them, or the mission. They jumped at the chance and replied, "sure man, this ought to be a trip". Little did they know, this would be a trip to last a lifetime. They boarded the "Little Bear" helicopter and took positions crouched down behind the ammo boxes. CWO Wilhelm shouted to them over the whine of the turbine engine, "Stay hunkered down behind those ammo boxes until I tell you to, then just kick out the boxes and we will be out of there". There were no headsets or helmets to give the two troopers where the pilot could talk to them directly in flight, so he would have to relay the instructions via the gunner and crewchief.

The pilots were gathered around discussing tactics as us crewmembers just stood back and listened to the plan. They were discussing the best way to pull off this re-supply. It was going to be dangerous on the re-supply ship. Almost like a suicide mission. I'm glad I wasn't on that slick tonight, and I felt really sorry for those kids from the re-arm point. They didn't have a clue what was going on out there in Indian Country.

"Look Mitch, Larry and I have been out there all night", Hayne Moore stated.. "The anti- aircraft fire has been very heavy, we have taken care of most of the .51's and now it is mostly small arms fire that seems to be slowing some. If we come in from the north and hang a hard right and head west I will turn on my landing lights to draw the fire away from you as best I can, and Larry will cover your ass. It ain't a great plan but it is all we have. The Arty is pounding the east and south so we can't go there. The west is really Indian Country so we don't want to start from there."

Everyone thought about it for a minute, and couldn't come up with a better idea, so the consensus was "Let's do it".

We all headed for our ships and began the ritual of getting the chicken boards, helmets and other gear squared away, checked the door guns one final time and climbed aboard. I glanced again at my watch and it was just after 2:20 A.M.

The Little Bear ship left first as we had a few little things to attend to, but moments later we slowly lifted off into the night sky heading back to the inferno of "Mole City".

In the distance we could see a single light of the battle, a glow in the southern sky. The closer we got the glow began to separate itself into many little lights. The flares dropped by the Spooky gunship overhead, the artillery flashes, the red almost laser like stream of tracers coming Down from the mini-guns of the Spooky gunship, and the tracers going up at the aircraft. Through our headsets on the radio we could hear the din of battle raging in the distance. This just heightened the adrenaline flow coursing through our veins.

Over the radio we could hear the Little Bear ship coordinating the re-supply with the ground commander, and arranging for a temporary halt to the artillery fire missions.

Moments later we were there at 1500 feet above the raging battle and joined the Little Bear ship in a clockwise orbit above the battle.

"Little Bear, this is Diamondhead 20", "go Diamondhead 20 replied the Little Bear pilot". "Pull out of this orbit and make a big swing to the northeast, we will join up there. Presently we are at 1500 feet enroute to that location. When we get linked up kill your navigation lights and get down on the deck and make your approach north to south. When you get parallel to the center of the Drop Zone make a hard right and we will escort you in. I will turn on my landing lights to draw fire away from you, then we will be blacked out on the way in." "Roger that Diamondhead 20".

The three ships started their southerly approach towards Mole City. The Little Bear ship just barely skimming the tree tops flanked on one side by Diamondhead 10. Diamondhead 20 was at 1000 feet and turned on his landing light. That drew and immediate response and the torrent of anti-aircraft fire was horrendous. He quickly turned off the Landing light and blacked out his navigation lights as he descended to occupy the left flank of the Little Bear ship. The three ships in tandem made the right turn inbound to Mole City.

The gunships barely seventy-five feet on either side of the Little Bear ship blazing away with their rockets and door guns, the Little Bear ship withholding fire for fear of hitting one of their escorts. In the distance a flare was fired to mark the Drop Zone, with a little adjustment the re-supply ship was lined up on the Drop Zone. As they neared the outer perimeter, the gunships peeled off to the right and left leaving the re-supply ship unprotected and on her own. The intense small arms fire hammered the lone ship on her final hundred-yard journey. You could hear the ting-ting-splat of the enemy rounds piercing the thin skin of the aircraft.

On short final to the Drop Zone CWO Wilhelm was in command of the ship, but WO Don Rodgers had his hands and feet on the controls also in case CWO Wilhelm should become shot or killed. His job was to also monitor the gauges in case some vital component of the aircraft was hit with hostile fire. Within seconds the Little Bear ship was over the Drop Zone

and had come to a hover just a few feet above the ground. Through the intercom CWO Wilhelm screamed to the crewchief and gunner to tell the two guys in the back to kick out the ammunition boxes, which they did frantically. It took but a few seconds, but with the murderous hail of enemy fire it seemed like a week.

As quickly as they had arrived, they were gone. As they crossed the perimeter wire through a hail of enemy small arms fire WO Rodgers broke in on the intercom "The engine oil pressure is dropping and the engine temperature is rising!"

It was decision time, either put it down immediately in Indian Country in the black of night and 10 miles from any friendly troops, or hope they can make it back to Tay Ninh, since it was the closest friendly installation. After discussing the dilemma quickly they voted to try and make Tay Ninh and put as much distance as possible on this little piece of "Hell".

As the blades frantically beat the air into submission, and the whining of the engine reached a deafening roar the gauges continued to worsen. Soon the lights of Tay Ninh were in sight. Praying as they went, they soon crossed the perimeter wire and put it on the nearest landing pad that they found, which was the re-arm point. After shutting the engine down and thoroughly checking out the problem of the gauges, a round had severed the main oil engine line. They had been flying with no oil for a while. They all were relieved, and very lucky to have made it back in one piece. The ship was shot full of holes, but just that one lucky shot had hit anything vital.

Through their heroic deeds the Manchu's had the needed ammunition to withstand the NVA onslaught.

Back at Mole City CWO Moore and CWO King had decided to keep the fire team split into two separate ships and fight individually as there were too many targets, and the Manchu's needed suppression on the entire perimeter. We would assume our previous position on the west and south with CWO Larry Kings Diamondhead 20 gunship. CWO Hayne Moore and the Diamondhead 10 gunship would again work the area to the north.

The Little Bear ship had been gone but seconds as we continued to expend our ordinance on the enemy below, after two passes we were totally expended and we were in route to Tay Ninh to rearm and refuel. CWO Moore contacted the ground commander, and let him know our intentions. "Recast Uniform one four, this is Diamondhead 20. We are fully expended and headed to rearm, we will be back ASAP". "Roger Diamondhead 20, just hurry".

Several Minutes later looking over the pilot's shoulder through the windshield, the soft red glow of the gauges breaking up the darkness of the cockpit I could make out our lead ship. It's red and green navigation lights evident, along with the incessant blinking of the red rotating beacon. In the distance the discernable glow of Tay Ninh City was quickly approaching.

"Tay Ninh Tower Diamondhead 10", "go Diamondhead 10". "Request straight in to POL, need a little gas in this old beater". "You're clear at your discretion Diamondhead".

Descending into the POL area we turned on our landing lights to locate the pumps. Having found them with a little effort, both old Huey's flared and settled slowly to the ground. The engines running at flight idle, the crewchiefs jumped out, removed the gas cap and started the refueling process. It would take but a few minutes.

The heavy gunships could only take on 1000 pounds. If we put more fuel, and a full load of rockets and ammo they would never get off the ground with their underpowered engines.

When we had our 1000 pounds of JP-4 on board, we obtained clearance from the tower to hover the few yards over to the re-arm point to begin our re-arming ballet once again.

This time we had some help. The local rearm point guys that had been loading the ammo in the Little Bear ship gave us a hand building the rockets, and helped us tote them, and place them in their launchers. We were exhausted, hot, and sweaty.

The lister bag was once again the center of attraction. We couldn't get enough water tonight to kill the thirst. We talked about the re-supply run as the rearm point guys finished loading the rockets, and what a crazy bunch of bastards they were. To pull that off in one of the biggest fire fights of the war.

Soon we were climbing back aboard and headed back to the war. There was silence in our souls as we had a chance to gather our inner most thoughts, and dwell on them for just a few moments, to have discussions with god and make silly promises, to see images of our family in our mind, and contemplate our fate to come.

In the distance we could see the familiar flares casting their eerie light on the landscape below. We could make out the navigation lights of an Air Force Forward Air Controller in his OV-10 Mohawk, and a Command and Control UH-1H slick that had one of the division upper level officers aboard to supervise the battle. They had arrived on station during our absence, and were orbiting counter clockwise high above the action below.

As we neared the battle the intensity of the ricocheting tracers became more distinct caroming high into the air. You could make out explosions around the perimeter of the tiny enclave. It was going to pick up right where we left off. I just gritted my teeth, checked the M-60 to make sure it was ready, and thought to myself, "You want me screw it come and get me you little bastards".

"Recast Uniform one four, this is Diamondhead 20, please advise situation", ETA two minutes. "Roger Diamondhead 20." "Charlie has broken through and taken over three bunkers on the north side and they are in the wire. I will mark our position with a strobe light. It will be the bunkers to the west of the light. Just start there and go anywhere you want. Get them suckers off our back".

"Diamondhead 20 this is Issue 15", "Roger Issue 15 go". I have a flight of two F-4's inbound now ETA 10 minutes. I suggest you stand off to the north when they drop these hot potatoes. They will be making their pass from west to east". CWO Larry King replied, "Roger that Issue 15, just call again when they're inbound"

We settled in on the west side and from 1500 feet began our run from the north punching off rockets in sets of two as we watched the tracers going in all directions below. The pungent odor of cordite was heavy in the Huey as we watched them impact in the wire, our M-60's finding their marks on the enemy caught in the open with nowhere to hide.

The roaring sound of the mini-guns cut through the night as their laser like trajectory-belched fire on the unsuspecting enemy below. It was like a replay of the previous trip the enemy tracers headed skyward searching for their tormentors our door guns again glowing cherry red and raining bullets on the NVA below. The NVA were everywhere but we had slowed the onslaught. At the end of the run we searched for altitude and again circled around to make another run. Once again the rockets found their marks in the groups of NVA. You could see them fall in groups some blown into body parts yet others were nailed to the ground and posts in the wire from the fleshettes.

We were under constant small arms fire, and The Manchu's were in a battle for their lives. The artillerymen with the Manchu's had lowered their 105's to chest high and were shooting beehive rounds point blank into the faces of the enemy.

"Diamondhead 20 this is Issue 15, flight of two F-4's are on location and beginning their runs west to east". "Roger that Issue 15 CWO King replied". We immediately held off to the north. As the F-4's came by all you could hear was a hiss of the fuselage cutting through the air, then the roar of their engines as they screamed by and dropped the napalm canisters which made a ball of fire that went 200 feet or more into the air and engulfed the landscape for several hundred yards into a fiery inferno. The NVA that were caught in the open would be fried to a crisp.

This was the scenario until 4:15 in the morning. Rearm, refuel return to the perimeter of Mole City. At 4:15 we spotted 50 to 60 NVA southwest of the friendlies trying to escape back toward Cambodia. We rolled in with the rockets and door guns and cut them to ribbons halting their impromptu retreat. After expending our rockets we orbited the area and let the door gunner shoot up what ammunition he had left into the fleeing throng of NVA. When the door gunner was expended on ammo, the C and C ships door gunners took over while we returned once again to Tay Ninh to rearm and refuel. At daybreak contact was lost and we flew around the pattern and inventoried the damage it was a sobering sight. The fleshettes had nailed NVA to the posts in the wire, to trees and anything else including the ground. Bodies were strewn everywhere, it seemed like hundreds of them scattered about with a multitude of weapons both personal and crew served. The napalm had fried many alive.

We remained on station until the wounded had been removed, and provided cover for the dustoffs. When it was all done, we had been in continuous action for 7 hours, and had played a decided role in the outcome of the battle for Patrol Base Mole City. It will be hard to ever forget.

The battle claimed 106 NVA lives that were counted and many more had been dragged off the battlefield from the 272nd NVA regiment, and the 9th NVA Division. Bodies of dead NVA soldiers would continue to show up for days buried in shallow graves throughout the area. The Manchu's had been hit with the full force of a 1500 man NVA regiment. Out manned three to one they had fought with great courage and had won a monumental battle.

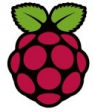
## Next Regular Meeting

The next meeting will be on **Thursday, June 30, 2016**, at 7:00PM. We meet in the Fellowship Hall of Redemption Lutheran Church, 4057 N Mayfair Road. Use the south entrance. Access the MRAC Yahoo group for important details about the February Meeting.

### Meeting Schedule:

**September 29th, 2016- 7 pm**

**Please do not call the church for information!**



## Club Nets

Please check in to our nets on Friday evenings.

Our ten meter SSB net is at **8:00 p.m.** at **28.490 MHz USB** Our two meter FM net follows at **9:00 p.m.** on our repeater at **145.390 MHz** with a minus offset and a **PL of 127.3 Hz**.

Visit our website at: [www.w9rh.org](http://www.w9rh.org)

**Or phone (414)-459-9741**



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## Chatter Deadline

The **DEADLINE** for items to be published in the **Chatter** is the **15th of each month**. If you have anything (announcements, stories, articles, photos, projects) for the 'Chatter, please get it to me before then.

You may contact me or Submit articles and materials by e-mail at: [W9rhmrac@Gmail.com](mailto:W9rhmrac@Gmail.com)

or by Post to:

Michael B. Harris

807 Nicholson RD

South Milwaukee, WI 53172-1447

## VE Testing:

August 27th, 9:30am— 11:30am

**No testing: June, July or December**

**Location: Amateur Electronic Supply Time: 9:30 AM (Walk-ins allowed)**

**ALL testing takes place at: Amateur Electronic Supply 5720 W. Good Hope Rd. Milwaukee, WI 53223**

## Area Swapfests

July 9th, [Swapfest '16](#) Location: Oak Creek, WI **Type:** ARRL Hamfest **Sponsor:** South Milwaukee ARC **Website:** <http://www.qsl.net/wa9txe>

July 10th, [Fox River Radio League's Hamfest](#) Location: Aurora, IL **Type:** ARRL Hamfest **Sponsor:** Fox River Radio League **Website:** <http://www.frri.org>

## MRAC Working Committees

### 100th Anniversary:

- Dave—KA9WXN

### Net Committee:

- Open

### Field Day

Dave—KA9WXN, Al—KC9IJJ

### FM Simplex Contest

- Joe – N9UX
- Jeff – K9VS

### Ticket drum and drawing

- Tom – N9UFJ

### Newsletter Editor

- Michael-KC9CMT
- Pancho- KA9OFA

### Webmaster

- Dave, KA9WXN

### Refreshments

- Hal—KB9OZN



ter is the newsletter of MRAC (Milwaukee Radio Amateurs' Club), a not for profit organization for the advancement of amateur radio and the maintenance of fraternalism and a high standard of conduct. MRAC Membership dues are \$17.00 per year and run on a calendar year starting January 1st. MRAC general membership meetings are normally held at 7:00PM the last Thursday of the month except for November when Thanksgiving falls on the last Thursday when the meeting moves forward 1 week to the 3rd Thursday and December, when the Christmas dinner takes the place of a regular meeting. Club Contact Information

Our website address <http://www.w9rh.org>

Telephone **(414)-459-9741**

Address correspondence to:

**MRAC, PO Box 26233, Milwaukee, WI 53226-0233**

Email may be sent to: [w9rh@arrl.net](mailto:w9rh@arrl.net) . Our YAHOO newsgroup:

<http://groups.yahoo.com/group/MRAC-W9RH/>



## CLUB NETS:

- The Six Meter SSB net is Thursday at 8:00PM on 50.160 MHz USB
- Our Ten Meter SSB net is Friday at 8:00PM on 28.490 MHz ± 5 KHz USB.
- Our Two Meter FM net follows the Ten meter net at 9:00PM on our repeater at 145.390MHz - offset (PL 127.3)



## Membership Information

The Hamateur Chat-

*Welcome*

The MRAC HamChatter is a monthly publication of the Milwaukee Radio Amateurs' Club. Serving Amateur Radio in Southeastern Wisconsin & all of Milwaukee County

**Club Call sign – W9RH**

**MRAC Website:** <http://www.W9RH.org>

**Editor:** Michael B. Harris, Kc9cmt, [kc9cmt@Earthlink.net](mailto:kc9cmt@Earthlink.net)



## Milwaukee Area Nets

Mon.8:00 PM 3.994 Tech Net

Mon.8:00 PM 146.865- ARRL Newsline

Mon.8:00 PM 146.445+ Emergency Net

Mon.8:00 PM 146.865- Walworth County ARES net

Mon. 8:00 PM 442.100+ Railroad net, also on EchoLink

Mon. 8:45 PM 147.165- ARRL Audio News

Mon. 8:00 PM 442.875+ WIARC net also on EchoLink 576754

**Mon. 8:30 PM 146.820 Waukesha ARES Net —**

**on the 1st, 3rd, and 5th Monday of each month.**

Mon. 9:00 PM 147.165- Milwaukee County ARES Net

Tue. 9:00 AM 50.160 6 Mtr 2nd Shifter's Net

Tue. 9:00 PM 145.130+ MAARS Hand Shakers Net

Tue. 8:00 PM 7.035 A.F.A.R. (CW)

Wed. 8:00 PM 145.130+MAARS Amateur Radio Newsline

Wed. 8:00 PM 147.045+ West Allis ARC net

Wed. 8:00 PM 28.365Mhz 10/10 International Net

Wed. 8:00 PM 147.270+ Racine County ARES net

Wed. 9:00 PM 145.130+MAARS SwapNet, Allstar FM-38

Thur. 8:00 PM 50.160, 6 Mtr SSB Net

Thur. 8:00 PM 443.800+ Tech Net

Thur. 9:00 PM 146.910+ Computer Net

Fri. 8:00 PM 28.490 MRAC W9RH 10 Mtr SSB Net

Fri. 9:00 PM 145.390+ W9RH 2 MTR. FM Net

Sat. 7:30 AM MW Classic Radio Net , Freq.—3885 AM

Sat. 8:00 PM 146.910+ YL's Pink HAMsters Net

Sat. 9:00 PM 146.910+ Saturday Night Fun Net

Sun 8:00 AM, State ARES Net 3967/3977.5/145.470

Sun 8:30 AM 3.985 QCWA (Chapter 55) SSB net

Sun 9:00 AM 145.565+ X-Country Simplex Group

Sun 8:00 PM 146.910+ Information Net

Sun 8:00 PM 28.365 10/10 International Net (SSB)

Sun 9:00 PM 146.910+ Swap Net

Daily: Milwaukee — Rag Chew Net: 7:00 AM, 3850 SSB + Florida Net 7 am, 14.290 mhz.

2 meter repeaters are offset by 600KHz - - 70 centimeter repeaters are offset by 5 MHz

SSB frequencies below 20 meters are LSB and for 20 Mtr and above are USB.

