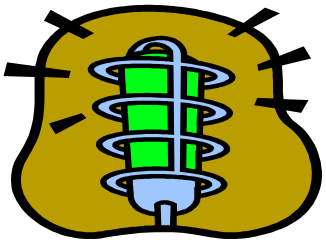
THE LED

Published by The Livingston Amateur Radio Klub



APRIL 2005

Livingston Amateur
Radio Klub
PO Box 283
Howell, Michigan
48844

www.qsl.net/milark

NET 146.680
SUNDAY 9PM

CLUB CALL IS: KB8ZTV

NEXT KLUB MEETING
April 14th 7:30PM at the EOC,
Highlander Road, Howell, MI

BOARD MEMBERS

President	Art	KC8WAZ
Vice-President	Bruce	N8GVD
Secretary	Mary	KC8SER
Treasurer	Clairus	KC8QQN
Program Director	Bob	K8VQC
Program Director	Jim	WB8AZP
Tech Coordinator	Jim	WB8AZP
Tech Coordinator	Jon	KC8VAB
Board Member	Chuck	W8CLK

COMMITTEE CHAIRPERSON'S

146.680 Repeater	Jack	KA8BOG
LED Editor	Jim	WB8AZP
VE Coordinator	Greg	AA5GO
PIO Officer	Brandon	KC8YHE
PIO Officer	Jim	N8ENX

SOCIAL EVENTS

16 Apr 2005 Milford ARC http://www.qsl.net/w8ydk
Contact: Mike Board, WA8WOQ
3106 South Milford Road
Highland, MI 48357
Phone: 248-685-1678
Email: mboard3106@aol.com

Highland, MI
Div: Great Lakes
Sect: Michigan

PREZ SAYS

“See you at the meeting”

LARK SOCIAL NOTES

ARK Dinner before the Meeting (DBTM)

sk on the repeater……

Secretary’s Report
General Meeting
March 10, 2005

Meeting was called to order by Art, KC8WAZ. The Pledge of Allegiance was recited and a moment of silence was observed. Introductions were made.

Duane, N8WMN, made a motion to accept the Secretaries Report, Irene, KA8MVW, was second. Motion Passed.

Mac, N8RBA, made a motion to accept the Treasurer’s Report this month. Ray, KB8WYE, was the second. Motion passed.

Sunshine Committee sent out birthday cards.

ARES/RACES: April 30th is the date for the big Livingston County CBRNE exercise.

Bob K8PBA gave a report on a recent presentation at the ARROW club, maybe we could get the same team to present at our group.

Brandon, KC8YHE, told us about joining the ARRL through the Klub so we could receive a commission on that membership. He also highlighted several PR articles in the local papers.

Jim, WB8AZP, gave a report on the new repeater, and detailed some of the fine tuning still to be accomplished. He also added that the PL tone was most currently off, unless there were band issues requiring it to be activated.

Jim, N8ENX, made a motion to apply for a vanity call for the Klub. Duane, N8WMN was second. Motion passed.

Rita made a motion to have the LARK Christmas dinner at the American Legion Hall 141. Jim, N8ENX was second. Motion passed.

Mac, N8RBA, made a suggestion to write a thank you note to the American Legion Hall 141 for the use of their facility during our awards banquet.

Mac, N8RBA, presented an award to Mary, KC8SER, since she was not able to attend the awards dinner. He also presented a dual award to Mary, KC8SER, and Clairus, KC8QQN, for volunteers of the year.

Marge, N8EAJ, reminded all of us to save your VG's receipts, and give them to her for redemption.

Van, N8GVD, won the 50/50 $66.50

Mac, N8RBA, made a motion to adjourn, and Ray, KB8WYE, was second. Motion passed.

Submitted by:
Mary KC8SER

SECRETARY'S REPORT
LARK Board Meeting March 2005
Board Minutes

Meeting was called to order by Van, N8GVD. Four board members were present. Copies of manuals for the repeater controller were paid out of the general fund. Chuck, W8CLK, made a motion to pay for these out of the emergency fund. Van was the second, and the motion passed.

Clairus, KC8QQN, made a motion to pay for the dinner of the ARRL director, Jim Weaver, K8JE, who spoke at our last meeting. Van, N8GVD, was the second, and the motion passed.

Meeting was adjourned.

Submitted By,

Mary KC8SER

TREASURER REPORT

REPORT WAS NOT AVAILABLE AT PRESS TIME

FAREWELL FROM MAX

A fond farewell to all my friends at the LARK. I was glad Mary, KC8SER, brought me to the meeting (and to dinner, too), to see my friends one last time. It was great getting those pats on the head and a hug or two. We share many memories, and we've done many things together, like Field Day, and Operation Care. I had to keep the old man (Dave KE8Z) going, you know.

I have retired and moved to Okemos, and live in a house with a family and their two children. I have a fenced in yard, and my own ball, and get to jog with them in the mornings.

I bid you all farewell.

MAX "K9DOG"

(Editor's note: A dog can find the time to write an article for the newsletter…your excuse is????????)

LICENSE STATISTICS

License Class	May 2000	March 2005
Novice	49329	29098
Tech +	334254	318387
General	112677	137334
Advanced	99782	77035
Extra	78750	106238
ALL CLASSES	674792	668163

EDITORS COMMENTS

April has decided to finally release its grip on the ice and snow, and in general, start to be pretty pleasant. Time to work on all those antenna projects from last year that you didn't get completed. It's also a real good time to write that article you've "been meaning to" for the LED. I look forward to seeing your upcoming work! Amateur Radio needs your support, and part of that support comes by

way of supporting local radio clubs, like LARK. If you have a differing opinion, I'd love to hear from you, but I don't think you can expect me too sway far from this mark.

Articles

We still need YOUR articles for the newsletter. Swap items, favorite stories, magical operating moments, remembering your first rig, the time your dog ate your logbook, swap and for sale items, favorite recipes, whatever. Need a suggestion for a good article? Just call! Need help writing it down? We can assist you. In case you just can't seem to remember how to reach me:

Jim Kvochick WB8AZP
10366 Greystone Court
Brighton, MI 48114-7650

810-220-2098 Voice
810-220-2126 Fax
330-283-7070 Cellular

WB8AZP@ARRL.NET
146.680 MHz most evenings

50/50 Plus Drawings

If you haven't attended a recent regular meeting, then you've missed out on fabulous prizes that are given away along with splitting the raffle pot. Ask a member who has attended for the low down. Better yet, why not show up at the next regular meeting?

SUNDAY EVENING NET ON 146.68

Let's not forget about the Sunday evening LARK net on 146.68 at 9PM.

It's a great time to connect with other LARK members, share information, and just in general gather on the repeater. You would think that a club the size of ours could muster up more than a handful of checkins, now wouldn't you? Why not even volunteer to take on the Net Control responsibility for one or two Sundays to gain some experience? Don't need experience in running a net? How about just volunteering to help out? Don't have the net preamble? Read the rest of this issue of the newsletter. Just want to have something to whine about? Fine, waste your talents.

TECHNICAL COMMITTEE

The technical committee has put together a very nice presentation for the April meeting on the new features and access codes for the repeater. I think you'll all be pleased with the work they have accomplished. Plan on attending the April meeting now!

OTHER COMMENTS

Be sure to welcome our new LARK members when you hear them on the air or see them at a meeting.

See you at the next meeting, right? (Even if you're not a member now, you can become one!) Need a ride to the meeting? We'll send someone to get you! Need someone to buy you dinner before the meeting? We can probably take care of that, too. Dress is casual, so don't worry about digging out your Tux or Formal. Do you have another effective excuse for not attending the meeting? Why not share it with others, in a lovely article for the newsletter? Remember, if you're not part of the solution, you're simply a part of the problem.

2005 MICHIGAN QSO PARTY

Attention Michigan Amateurs. It's that time of year again! Time to start talking about the 2005 Michigan QSO Party. This is a great opportunity to get on the HF bands, have some fun, and represent the great State of Michigan.

The organizers of this event would like to see as many Michigan stations on the air as possible. It is the activity of the Michigan stations that make this event a success.

As you can see from the rules listed below, this is only a 12 hour event. Please consider getting on the air for the whole thing, or any portion of the 12 hour period. You can operate from home, portable, or mobile. We again, with the support of mobile stations plan on having activity in all 83 counties.

How about making this a club event? You can submit your individual or multi-op scores under the name of the your club and maybe bring home the club plaque. Hey, why not challenge another local area club or other groups within your club? Are there others in your club that would consider a mini expedition for a portable operation in one of the Michigan counties with minimal activity?? Those of you that have been in the QSO Party, please help us get the word out and encourage other Michigan hams to participate and join the fun. The name of the game is to have fun and make Michigan "Radio Active" on April 16th. Hope to hear you on the air!

Date /Time: Michigan QSO Party, sponsored by the Mad River Radio Club, from 1600Z April 16th until 0400Z April 17th. Stations may operate the full 12 hours. (12 noon to 12 midnight local Michigan time on April 16)

Modes and Categories: Phone and CW on 80/40/20/15/10 meters. Single-op, multi-op, and mobile categories. Single-op entries are categorized by output power, QRP (5W or less), Low Power (100W or less), and High Power (greater than 100W)

Multipliers: Work stations once per band and mode. Work other states and Michigan Stations. MI to MI QSO's are allowed. Work portables and mobiles again as they change county, state or province.

Exchange: Exchange QSO number and location (county for MI stations, State/province or "DX" for others).

Scoring: One point per phone QSO, two points per CW QSO. Count multipliers once per mode. Multipliers are MI counties for all entries, plus states & provinces for MI entries only. Final score is total QSO points times total multipliers.

Freqs: Suggested frequencies: CW-3545, 7045, 14045, 21045, 28045; Phone-3850, 7225, 14250, 21300, 28450.

Log Submittal: Mail logs no later than 30 days after the contest to: Mad River Radio Club, c/o Dave Pruett, 2727 Harris Road, Ypsilanti, MI 48198 or via e-mail to logs@miqp.org

More Information: For complete rules, along with free logging software, log and summary sheets, see http://www.miqp.org

73 es cu April 16th 2005... Mark NU8Z

MiQP For First-Timers

By Dave Pruett, K8CC
k8cc@comcast.net

The Michigan QSO Party (MiQP) is an operating event held annually with Michigan as the center of attention. This article is a quick overview for those new to MiQP, to explain what it is and to offer encouragement to jump in and participate.

First of all, what is a “QSO party”? Over the years, this term has come to define an on-the-air operating event focusing on a particular geographic area. Amateurs inside the target area (in this case Michigan) earn points towards their QSO party score for making contacts with other amateurs located anywhere, while amateurs outside of the target area get QSO party points only for contacting amateurs inside the target area.

Perhaps the next question is: "Is the MiQP a contest?" Yes it is – the entrants are participating against one other and plaques/certificates are awarded after it is over. But don't let that scare you off - the MiQP is a lot less intense than other contests you might be familiar with, such as Sweepstakes, DX contests, or even Field Day. The bands are not as crowded as during those other events, and the operating style is a lot more relaxed. It's a great venue for a first-timer to get their feet wet.

Why might you want to participate in the MiQP? First of all, it's a great opportunity to hone your HF operating skills or work the bugs out of your HF station. MiQP can provide a concentrated dose of operating that will crack the rust off your CW ability or brush up on your phone operating techniques, skills that you can use in other on-the-air activities.

The fun thing about MiQP for Michigan amateurs is that we are the center of attention. When a Michigan station calls "CQ MIQP" there will usually be several replies. Many MiQP participants make several hundred contacts during the event, even with modest stations such as barefoot transceivers and dipoles. For many, there is a tangible feeling of camaraderie as you work fellow Michiganders, some located in sparsely populated counties with exotic names like Chippewa, Missaukee, or Presque Isle.

What does it take to participate in the MiQP? All it takes is to get on the air during the MiQP period and make contacts with other participants. When it's over, mail in your log if you like so that it can be checked and your score included in the results; you may even win a certificate or plaque. If you include your radio club's name in your entry, then your score will be tabulated along with other member's scores in a separate sub-competition to determine the top Michigan club in the MiQP that year.

When does MiQP happen? MiQP occurs the third Saturday of April every year. For 2005, the starting date for MiQP is Saturday, April 16th. The contest period begins at noon local time here in Michigan (1200 EDST or 1600Z) and runs to local midnight (2400 EDST or 0400Z on April 17th). The contest period was deliberately chosen to be easy to fit into your weekend schedule – you can get up Saturday morning, get some chores or family activities done, and sit down for an afternoon or evening of operating.

Making MiQP QSOs is easy. You can operate on any of the "traditional" HF bands (i.e., no WARC bands) from 80 thru 10 meters. The exchange is your QSO number for that contact – i.e., the first is 001, the second 002, etc., plus your Michigan county. On CW, everyone uses the official county abbreviations from the list on the MiQP web site. Stations outside of Michigan will send their QSO number and state or province abbreviation.

Barring some sort of major propagation disturbance, you will find MiQP activity on 40M CW & SSB for the entire twelve hour contest period. This is a good band to get a mix of in-state and out-state coverage, plus it's popular with the mobile MiQP entries that move from county to county during the event. (Mobiles can be worked again when they change counties.). During the day there is usually good activity on 20M, and lesser amounts on 15M and 10M, depending on the solar cycle. Once darkness falls, there is a lot of MiQP activity on 80M.

Here's how your MiQP score is calculated. Each CW QSO is worth two QSO points while a phone QSO is worth one point. Your final score is equal to the QSO points you've accumulated multiplied by the number of multipliers (Michigan counties, non-Michigan states and Canadian provinces) you work. Multipliers are counted separately on **both** CW and phone. For example, if you work Washtenaw County (WASH) on both CW and phone, that's two multipliers.

As you start out in MiQP you might just want to make QSOs and have fun, but here are some suggestions to keep in mind which should increase your score. A station may be worked once on both CW and phone on each band, so try all five bands (and both CW and phone) to look for MiQP QSOs. The lower bands (80M & 40M) are usually better for in-state QSOs, and out-state QSOs out to 500 miles or so, but try the high bands (particularly 20M) to bolster your score with US states and Canadian provinces from out west. Also, while most people probably have a preferred mode they like to operate, because state and province multipliers are counted separately on CW and phone, in MiQP it's worth the effort to spend some time on the "other" mode to build up the multiplier count for a good score.

When MiQP is over, you have thirty days to submit your entry in order for it to count in the final results. (Note: If you make MiQP QSOs but don't send in a log, no harm is done; the people you worked still get credit for your QSO(s) with them.) Paper logs can be sent to: **Mad River Radio Club, c/o Dave Pruett, 2727 Harris Road, Ypsilanti, MI 48198**. Electronic log files (ASCII text only) can be e-mailed to **LOGS@miqp.org**.

What can you win for participating in MiQP? The Michigan winner in each majority category receives a beautiful 10" x 13" plaque, a total of eleven in all. The top single-operator score in each Michigan county making at least 50 QSOs wins a handsome certificate.

To learn more about MiQP, check out the Michigan QSO Party web site at http://www.miqp.org. There you will find a wealth of information including complete rules, contest forms (summary, log, and multiplier count sheets), a list of county abbreviations, past MiQP results, operating tips and links to free logging software.

LIVINGSTON AMATEUR RADIO KLUB
PO BOX 283
HOWELL, MI 48844-0283

03/16/05

Jim Kvochick WB8AZP, LED ED.
10366 Greystone Court
Brighton, MI 48114-7650

The following, as you demanded, is for the LED:

A FUTURE PRESENTATION AT LARK

Art, KC8WAZ, your Klub president and I visited the ARROW, (Amateur Radio Repeater of Washtenaw), club meeting, 03/09/05, at Ann Arbor. A program about, "SKYWARN", was presented by the KARC, (Kalamazoo Amateur Radio Club), that displayed many associated communication components. A very fine talk by several club members on how they used the displayed items and how they developed an on going interest in the surrounding counties of Barry, Calhoun and Jackson was given.

Our President, ART invited them to present the program at a future LARK meeting. They have accepted the invitation.. No date has been set as off 03/16/05.

LOST, (Line Of Sight Team), may be contacted at any of the following:

Line Of Sight Team Team
PO Box 555
GALESBURG, MI 49053-0555

269/665-6421

147.470MHz PL=94.8Hz KC8MUW@LOSTeam.com WWW.LOSTeam.com

Echolink Node #96785

Very 7 3, Bob, K8PBA

h:\qw\pba\qw\ledlark.035-56130

Lightning and Amateur Radio

by Jim Busard, N8ENX

Spring is almost here, and now is a good time to start thinking about protecting ourselves, our equipment and property from lightning damage. Many of us are complacent when it comes to lightning protection. Some believe that their tower or mast is installed into the ground and there fore it is grounded and won't have any problem. Some believe " It won't happen to me!" and some say that they just disconnect the coax from the radio and that's all that is needed. Well all these things are NOT true and do very little if anything to prevent lightning damage.

A number of years ago, there was a Ham who installed a brand new 40 foot tower, the base of which was buried in the ground 5 feet deep, good ground right. The tower had 3 guy wires attached to the top and to 3 poles mounted in the ground 5 feet deep, good ground right. On this tower was a 20 foot long UHF commercial repeater antenna mounted at the very top, 10 feet below were 2 side arms one with a dual band vertical and on the other a discone antenna. All the antennas were fed with regular coax except the repeater antenna which was fed with 7/8 inch hardline. About 3 years later the Ham was out on a boat ride on a sunny summer day having a QSO with a fellow Ham, he noticed some heavy clouds building up in the distance, about 15 miles from his current location, but what appeared to be in the vicinity of the tower location. A couple of minutes later the QSO ended unexpectedly, must have lost power to the repeater the Ham thought. When the Ham returned home that evening the power was out, but not at his neighbors. Further investigation found the MAIN circuit breaker was tripped, so he turned it on. At that point the lights came on, but strange squealing and beeping noises where heard around the house. Further investigation found an answering machine to be the culprit, and a computer and a VCR and a TV and a UHF repeater. The tower had taken a direct lighting hit during that 5 minute thunderstorm and not only the previously mentioned items, but also the central A/C compressor, a cracked heat exchanger in the furnace and the best one, all of the joints of the basement suspended ceiling grid where spot welded together! Sure made the ceiling more sturdy! Oh and after lowering the tower down the next day and removing the 20 foot long UHF repeater antenna, out of the end of the fiberglass tube came 20 feet of copper tubing in little bitty pieces!

Do I have your attention? I hope so because this CAN happen to you, although I pray it NEVER DOES.

Now lets look at what can be done to minimize the damage before it happens. Simply disconnecting the coax from the back of your radio will probably save your radio but what about everything else, after all that lightning bolt just jumped a several MILE gap.

There are several good sources for lightning protection, one of the best is PolyPhaser Corp. (www.polyphaser.com)another good source is the ARRL (www.arrl.org). Some of the important things to do is ground all three legs of the tower by using a multiple ground rod system, use a "*single point ground*" in the ham shack and use lightning protectors on all of your coax coming into the shack. I can not cover all of the information on this subject in this new letter (the editor would shoot me) but I would like for everyone to take the time and read the information at these web links, http://wrblock.com/Papers/technical_paper_home_page.htm And also check out http://www.nr6ca.org/lightning.html

Some Basics
Grounding and Lighting
Protection, Part 1

Is there really a true "science" of grounding and lighting protection? For many of us ham radio operators, grounding seems to be more of a "black art" than science. Maybe the best way to appease the radio gods would be to try a few incantations over a boiling caldron!

Now, if you believe all that, I have a bridge in Brooklyn you may be interested in! Actually, there is a kernel of truth in the above paragraph, for many things which do not seem plausible are truly affected by grounding. First of all the grounding requirements due to the presence of radio frequency energy are different from those required for lightning protection. Thus, two different grounding systems are needed for the vast majority of amateur radio installations: one for RF grounding and one for lighting protections. This month we take a concerned look at lighting ;in the second part of this article, next month we will look at RF grounding.

Protecting Yourself

At present, there are two different schools of thought on the subject. The first is to take all necessary precautions to prevent the strike; the second is to ground the heck out of everything so that if you take a strike there is sufficient protection for your equipment. Frankly, I believe in both : Take all the necessary precautions and then ground everything! Many lighting " experts " believe that all a lighting rod does is attract lighting. A close parallel in the amateur radio world is the amateur with the lowly (?) ground plane or vertical antenna. On the surface, it would seem that lighting would strike this unobtrusive antenna less often than it would a large yagi array. In fact, the opposite is true! Lighting does not start from the sky and travel downward. It appears, especially from a distance, to travel in a downward motion, from the sky to the earth, but it actually starts from the ground up. As a charged air mass (usually clouds) comes into an area, the possibility of an article on the earth gaining enough charge for a lighting strike increases enormously. The cause of this static build- up are varied, but include things like the wind blowing across the antenna. If this static discharge is not dissipated rapidly, small " lighting bolts " called feelers start coming from the end of the antenna, tower, etc. These feelers grow longer and longer, and have a duration sometimes approaching minutes rather than seconds! Finally, these feelers are met by primary stroke of lighting coming from the sky. Yes, the vast majority of lighting's energy comes from the sky, but without the feelers coming from the ground there would be no lightning strike. What happens with the lightning rod or, in case of amateur radio, the vertical antenna, is that there is very little on the end of the antenna to dissipate the electrical charge. A rule of thumb is that an item will "protect" an area equal in radius to twice the height of that item. Or, conversely, the vertical or tower will draw energy from a circle on the ground equal to twice its height. For example, a 30-foot vertical will draw energy from a circle 60 feet in radius (120 feet diameter).

Actually, the area protected is a cone with the apex at the top of the tower (or vertical), and the base of the cone a circle with a radius equal to twice the height of the antenna. All this energy is concentrated into a very small area. In the case of a vertical with solid top (corona ball, etc.) this is usually in the neighborhood of a square inch or so. In the case of a vertical witch ends in open tubing, the actual area is in the order of 0.1 square inch, if that! The result is a very concentrated charge, which tries to make contact with the energy from the sky. This happens whether or not the end of the antenna is insulated.

With yagis, the energy is dissipated over a much lager area. The result is that there is much less chance of gaining a sufficient level of charge to get the feelers started. In the commercial radio world there are all sorts of items available to help dissipate the charge. Many of these take the form of a spline ball or some similar arrangement.

A spline ball consists of many wires or aluminum foil strips connected to a common point. This effectively increases the area of the tower, or other antenna support, and dissipates the energy build up by static. In the case of an intense electrical storm these devices may actually glow from corona discharge. This is fine, because the energy is being dissipated rapidly and will not become a feeler.

Large yagi arrays act somewhat as a spline ball, dissipating the electrical energy rapidly. However the higher the antenna array, the more antenna are required to dissipate the energy. Spline balls can be bought (they cost in the neighborhood of $150 apiece), or they can be built. The key to their placement is not that they be on the highest part of the tower, but that they be located near the top. In the case of an antenna mounted on top of the tower you can mount a spline ball on each leg near the top of the tower and still get excellent protection. With tower over 100 feet in height, it is recommended that spline balls be placed every 75 feet. This is to reduce the charge as it is developed along the tower.

Grounding for lightning protection actually has two functions; to allow the charge build up on the antenna a ground path, and to protect in the case of a direct strike. As stated above, if you keep the charge build up from producing feelers, then you will not take a strike.

Grounding for lightning protection must be as straight as possible from the item being protected. Very gentle arcs are a must ; avoid right angle bends at all costs. A right-angle bend places a very high impedance in the ground wire, and the lightning will often jump off the ground wire and go elsewhere! Keep the ground wire in a straight line ; never loop down and back. When connecting with a ground rod, bring the ground wire into the rod with nothing between the rod and the wire. Clamp it very securely or thermal - weld it in place. Never bend a ground wire over 90 degrees - the lightning will continue downward, ignoring the remainder of the wire!

All coaxial type feed lines should be grounded at three points; at the top of the tower , at the bottom of the tower , and at the entry point into the building. Ground the feed line by removing the outer covering of the coax and attaching a ground wire to the shield. There are commercial attachments made for this purpose, but simple hose clamps can be used to attach the ground wire. After attaching the ground to the coax shield make sure to waterproof the area.. Keep the ground wire traveling downward in as straight a line as possible until making the ground connection to the tower, ground rod, etc..

The use of " CAD Welding " or other thermal bonding techniques can be used if dealing with a solid object like a ground rod. However, never use these techniques then dealing with hollow objects like a tower leg. The heat generated by the thermal process causes the galvanization inside the leg to dislodge, thus setting the stage for corrosion. After a relatively short time, the tower rusts from the inside out!

When clamps or bolts are used, they should be checked every six months. Just loosen and re-tighten the bolt or clamp to remove any traces of corrosion which may have up. this is not necessary with the connections made to the coax shield which have been waterproofed. Each and every leg of the tower must be grounded! This includes even small towers. Bring the grounds to separate ground rods located near each tower leg. The use of rods over five or six feet long is usually unnecessary ; four - foot rods give good grounds.

The power line ground must be good. At the point at which the power line enters the building a ground should be in place on the neutral. Often this is just a piece of #14 wire clamped to the conduit entering the meter base. This in turn , is usually clamped to a three foot ground rod driven into the soil at the base of the meter. Replace this wire with a much heavier wire, at least #6 or larger. Make sure the ground rod is OK, and follow the rules about no large bends in the ground wire. Anything external to the building should be grounded, including TV antennas, metal on chimneys, etc. the idea is to bleed off those charges strong enough to produce the feelers which result in lightning.

One more thing, check the electrical ground inside your home. It should exit the circuit breaker or fuse box, exit the home and be connected to at least one ground rod outside. Do not rely on a ground connected to the water pipes inside the home.

73,

Public Service Corps

The packet and Winlink equipment has arrived and is to be installed at the Saint Joseph Mercy Livingston Hospital and Woodland Health Center. Antennas have been ordered and installation is to take place shortly.

Just a reminder to mark your calendar for the early AM, Saturday, April 30, 2005. Livingston County amateurs will participate in one the largest full scale exercises in Michigan. The 1st District Regional Medical Coalition and Livingston County will conduct an exercise involving public safety, local public health and the hospitals with in 1st District, called LIVEX-05. Hope to see all of you at the exercise, the meeting time and place will be announced on the radio.

Enclosed is a suggest go-pack for your consideration.

1. **Dual-band HT in padded belt case.**
2. **Copy of current FCC Operating License.**
3. **ARES / RACES ID**
4. **Paper / Pens / Pencils / Notepad**
5. **"Tiger tail" style antenna (enhances transmit and receive of typical "rubber duck" by 3 db) (extended gain rubber duck antenna)**
6. **AA battery case for HT or multiple batteries if using NICADS etc…**
7. **Extra Batteries if using AA battery case**
8. **DC adapter & cigarette plug cord for HT**
9. **Two extra fuses, for HT cord.**
10. **Charger for NiCad's or other type charged battery packs.**
11. **Earphone**
12. **Speaker mike**
13. **Small "Wal-Wart" power supply for HT and lightweight extension cord**
14. **Leatherman style multi-purpose tool or similar**
15. **Mini-Mag-Lite, extra bulb and spare AAs**
16. **Emergency gas / phone money ($10 bill, + four quarters and five dimes in pill box).**
17. **SO-239 to male-BNC adapter to fit HT to mobile antenna coax and female BNC to SO-239 to fit HT gain antenna to coax jumper.**
18. **Magnetic Mount Dual Band Antenna with coax**
19. **Coax jumper cable to extend either magnetic mount antenna or rubber duck antenna. Suggest 25 feet of coax.**

20. **Sunglasses, matches, tissues, sewing kit, insect repellent, tweezers, Spare eye glasses of current prescription.**
21. **Band aids, moist towelettes and sunscreen, personal medications**
22. **Operating reference card / manual for HT**
23. **ARES phone and frequency reference card**
24. **Message handling forms**
25. **<u>Compass and Binoculars</u>**
26. **2meter 50 Watt Mobile Radio, Power cord, Manual, Ext speaker, fuses**
27. **Extra 10' AWG 10 gage twin lead extension cord, with battery clips, in-line fuses and *Kenwood & Ford T type / Anderson* connectors to HT or mobile Radios were discussed.**
28. **Cable ties, Electrical tape, rubber bands**
29. **Adjustable open-end wrench, (battery terminals & radio mounts)**
30. **Folding hex key set (antenna tuning)**
31. **Klein pliers with crimpers and side cutters (terminals)**
32. **Needle nose pliers**
33. **Channel locks or Vise-Grip pliers**
34. **Small, mobile-type SWR/power meter**
35. **Pocket VOM or multi-meter w/ test leads**
36. **Assorted connectors / adaptors including no-solder BNC and UHF for emergency repairs**
37. **Jacket, foul weather gear, change of clothes**
38. **List of important telephone numbers, cellphone**
39. **One meal, snacks and water**

LARK SUNDAY NIGHT NET PREAMBLE

And now, the excuse "I don't know the net preamble" is eliminated from the excuse list.

THIS IS THE LIVINGSTON COUNTY AMATEUR RADIO CLUB NET. THIS NET MEETS EVERY SUNDAY EVENING, AT 9PM LOCAL TIME, ON THIS REPEATER. THE PURPOSE OF THIS NET IS TO DEMONSTRATE THE EMERGENCY PREPAREDNESS OF THE LARK, PROMOTE GOOD WILL AMONG RADIO AMATEURS, PROVIDE A SERVICE TO THE RADIO AMATEURS WITHIN THE RANGE OF THE REPEATER, AND TO IMPROVE OUR CAPABILITIES IN COMMUNICATIONS.

THIS IS YOUR NET CONTROL STATION FOR THIS EVENING, (your call), MY NAME IS (your name), AND I'M LOCATED AT/IN (location). AT THIS TIME, I WOULD LIKE TO INVITE ALL RADIO AMATEURS TO CHECK IN. PLEASE CALL (your call).

(after list is established, go through list)

ARE THERE ANY OTHER CHECK-INS BEFORE WE BEGIN THE ANNOUNCEMENT SECTION OF THIS NET? IF SO, PLEASE CALL (your call)

(Announcement section consists of any ARRL, FCC, DX, HAMFEST, OR CLUB bulletins)

ARE THERE ANY ANNOUNCEMENTS FOR THE GOOD OF THE NET?

WE'LL NOW BEGIN THE QUESTION AND ANSWER PORTION OF THE NET. ANY ELECTRONICS OR AMATEUR RADIO QUESTIONS PLEASE CALL NOW. THIS IS (your call).

IS THERE ANY OTHER STATION THAT HAS FURTHER ANY FURTHER ANNOUNCEMENTS OR QUESTIONS FOR THE NET?

THE SWAP N' SHOP SECTION OF THE LARK NET IS NOW IN SESSION. IF YOU HAVE ANY ITEM FOR SALE, OR ARE LOOKING FOR AN ITEM, THIS IS YOUR OPPORTUNITY TO LET ALL OF US KNOW ABOUT IT. ALL ITEMS ADVERTISED ON THIS PORTION OF THE NET ARE TO BE NON-COMMERCIAL, OR PRIVATELY OWNED ITEMS. PLEASE LIMIT YOUR ITEMS FOR SALE TO ONLY AMATEUR RELATED GEAR. THE LARK CLUB, REPEATER TRUSTEE, AND NET CONTROL ARE NOT RESPONSIBLE FOR ITEMS BOUGHT OR SOLD ON THIS NET. AT THIS TIME I WILL STAND BY FOR CALLS WHO WOULD LIKE TO LIST AN ANNOUNCEMENT ON THE NET. PLEASE CALL (your call).

DO WE HAVE ANY LATE CHECK-INS OR ANY OTHER ANNOUNCEMENTS FOR THE GOOD OF THE NET?

THIS IS (your call) NET CONTROL FOR THE LIVINGSTON AMATEUR RADIO KLUB NET. I WOULD LIKE TO THANK ALL OF THE STATIONS ON FREQUENCY FOR THEIR PARTICIPATION, AND I'M SECURING THIS NET SESSION AT (current local time). 73'S EVERYONE.

FROM NEIL, K8IT

My first Patent!!!!

To read it, follow these instructions:
1. Go to this web site
http://appft1.uspto.gov/netahtml/PTO/search-bool.html
2. type in “SABLATZKY” without the quotes in the term 1 box
3. select “Inventor Name” from the Field 1 pull down box
4. Click on the “Search” button
5. Click on the application number or title to read the patent.

73, Neil K8IT
31+ Years of Amateur Radio (1974-2005)
ARRL TTF HSMM WG HF-HSMM PROJECT LEADER
ARRL BPL ARIA WG
AEC Livingston County

The First Fox Hunt of the Season

On March 30 at approximately 8:00 pm, the repeater was keyed up a couple of times with no audio or identification. On the third key up, the transmitted signal never went away. After several minutes of hoping the transmitted signal would stop, I activated the repeater PL so that the repeater would not stay in time out mode and would be somewhat usable. The transmitted signal was fairly weak and most users where able to overcome it and use the repeater. After about an hour of steady carrier from the stuck transmitter, I asked for assistance from anyone that was available to check the repeater input frequency to gain a general idea of the geographical location of the transmitter. With the help of KC8YHE, AB8MI, KC8YHU and KC8ZKZ we pretty much eliminated North and East portions of the county (thx again guys).

After 2 hours of this problem, I went hunting. I jumped it the Jeep and headed towards Brighton first, with weakening signal I shifted south to Hamburg. With still no increase in signal I headed back west towards Pinckney where I started getting a little more signal so I headed south towards Dexter then over to Hell (could it be a transmitter form HELL :)) I ended up back in Pinckney on the west end of town and proceeded west down M-36, the signal was getting stronger then weaker, I headed north on Pingree Rd. with an S9 + signal. I turned onto Spears Rd. and looked for a car or truck with a glow coming from it because after 3 hours of constant transmitting, something HAD to be glowing! No luck, I was close, I could almost smell the burning of transistors, then, then, the signal quit! All that, sssoooo close, and poof it was gone!.

So somebody in the vicinity of Pingree and Spears in Pinckney may be getting a good chuckle about this, unless his radio is toast, then that's to bad, but if the radio still works that's great and lucky you, send an anonymous letter to the editor of the LED and let me know what kind of radio that is, cause I want one.

Please everyone, be mindful of your equipment so that this type of thing doesn't happen and prevent urgent communications.

73,

Jim - N8ENX

WAL-MART SELLS HAM RIGS SOON

Bentonville, AR

Today, spokespersons for Wal-Mart announced that they would begin carrying a complete line of amateur radio equipment and accessories in their “super center” stores this fall. In a bold move, Justin Kidding, VP of special retail projects at the firm, displayed to press and analysts the new equipment lineup, slated to be in stores this fall.

“We plan on stocking all the things that the cost conscience amateur operator might want”, said Kidding. “Our market research indicates that amateurs are just the kind of “frugal” customer we want to attract at our stores.”

“Normally, “ham” radio equipment is pretty expensive”, added Paul My-Legg, director of product buying for Wal-Mart. “By special arrangements with equipment manufacturers and parts providers, we have been able to take some of the financial pain out of purchasing new equipment.”

“By eliminating some of the frills often found in today’s communications equipment, we can put more hams on the air”, Legg added. “all of our new transceivers require the user to add their own coax connector or power cable to make the radio complete, and this saves us tons of money”.

The new equipment will be marketed under the brand name FUBUSY, (pronounced FOO BOO SEE), which is an acronym for “For Us, By Us, Screwed up by You”. Models include the FUBUSY ACKACKACK transceiver (for working local repeaters), and the FUBUSY 160 through 6 meter AM/FM/SSB/CW/PSK/PACTOR/WINLINK transceiver, with antenna tuner and 2 KW amplifier. “Type acceptance is expected

any day", according to Noah Weigh, engineering manager for the company who has designed and built the gear for Wal-Mart. With over 82 items in the complete FUBUSY product family, there's bound to be something for everyone. The US based Korean firm specializes in building copies of things that are copies of other things that are knockoffs for other things, especially when the ideas come from the concept created by other companies.

Initial equipment purchasers will receive a free canned ham, in celebration of this historic event. Wal-Mart expects to have equipment on the shelves in super centers around November 31st. Watch for the banner displays in the lawn and garden section.

DON'T FORGET!

We need trained amateur radio operators with go packs for the upcoming LIVEX05 event on April 30th. If you think your skills might be a little rusty, let someone know. If you're having trouble with your go pack, we can't help you if we don't know about it.

Remember too, your ID cards, (ARES, etc).

We'll be talking more about this at the meeting on the 14th, so please try and make it.

This is a huge opportunity for us to help make amateur radio shine in Livingston County. We need to all get "on the bus" with this one!