



USECA EXPRESS



Michigan's Largest and Most Active Amateur Radio Club

UTICA SHELBY EMERGENCY COMMUNICATION ASSOCIATION, INC. Volume 22, Number 7, September 2006

USECA NEWS

NOTE: You can now receive via first class mail, a printed copy (B&W) of the *Express* for an additional (annual) cost of \$10.00.

More details are described in the Board Meeting Minutes on Page 4

The newly revised membership application is on Page 11.

USECA's Streaming Audio

Go to our web page, click on "The K8UO Repeater" and you will find the audio section—there you will find more than 1300 hours of repeater audio including a "search" function.

Eat B 4 U Meet

September's menu, and of course for a small nominal fee, we will serve Chili Dogs with Fries.

Dennis

[W8Dah](#) [Food](#) [Guy](#)

Amateur/Ham

By Dick Arnold, AF8X

MERRIAM-WEBSTER Dictionary-**Amateur-** one who engages in a pursuit, study, science, or sport as a pastime rather than as a profession-one lacking in experience and competence in an art or science.

This definition doesn't exactly instill confidence of the operators engaged in emergency communications or other public awareness events.

When describing myself to "outsiders," I refer to myself as a **Ham**. Almost everyone knows about ham radio, "Sure it's just like CB, right?" Well what ever you call yourself, try to enlighten your audience about your operation. Impress them with your technical skills and knowledge.

For the past several years, Amateur Radio has slipped in popularity. It is no longer a magic and mysterious hobby. Other modern technology has left us in the dust. It's hard to impress a person with the ability to talk around the world when the capability is available to anyone with a computer or cell phone.

When I was a youngster, I was enraptured by CW. (I still am), but it seems now, potential hams look at it as a stumbling block rather than a challenge. The FCC and ARRL have reduced the required knowledge to become licensed until all you need is a good memory to memorize the published questions and answers. This is not the fault of the new hams that the tests have become a non-factor; I would have welcomed easier tests back in my beginning years.

The problem is the amateur radio ranks are shrinking and the technology has been surpassed and is available to everyone, without testing.

Residual Noise Pollution in Modern Phase-Locked Loop Receivers

THE PROBLEM

Do you feel that the bands are much noisier than they used to be? Do you often turn on your rig and call a station time and time again only to get no reply? Well, the problem may be residual noise pollution. When you turn your rig off, some of the signals you have been copying become trapped inside the phase-locked loop of your receiver and are unable to escape. One sure sign that you are suffering from RNP is when you turn your rig on after a few days and hear the same station that you heard calling CQ immediately before you last switched off. These rogue signals accumulate and will remain inside the rig unless steps are taken to flush them out.

THE CURE

The cure for RNP is fairly basic but the author can obviously take no responsibility for clean-ups that go wrong. Remember, there is no compulsion to try this. This system works very well for an IC-706 and also an IC-735 but some problems may occur when flushing out stubborn signals from older, valved rigs.

STAGE ONE

Remove all external appendages from the rig. This means all knobs, buttons, connectors etc. Don't forget to disconnect from the power supply first!

STAGE TWO

Peer inside the case. If any obvi-

—Continued on Page 7

Next Meeting — September 12

CLUB DIRECTORY

BOARD OF DIRECTORS

President	Chuck Perushek/N8ZA (586) 557-4983
Vice President	Brad Tarratt/N8VI (248) 506-7609
Recording Secretary	Ann Manor/KT8F (586) 751-3893
Treasurer	Dennis Gaboury/W8DFG (586) 465-7126
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Board Member	Phil Manor/W8IC (586) 751-3893
Board Member	Joe Kennedy/N8OZ (586) 977-7222
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Field Day Chair	Phil/W8IC & Ann/KT8F (586) 751-3893
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Historian	Jerry/K8CFY (586) 791-4484
Liaison	Dave/KC8TTQ
Mails/Sorters	Ann/KT8F; Phil/W8IC; & Crew
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Photographer	—OPEN—
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Public Relations Officer	Ken/N8KC (248) 652-1187
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Technical Director	Floyd/W8RO (248) 391-6660
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VE Testing	Joe/N8OZ (586) 977-7222
Webmaster	Brad/N8VI (248) 506-7609

CONTROL OPERATORS (*Phone Number Above)

Dennis/W8DFG*	Joe/K8OEF*	Fred/W1SKU
Phil/W8IC*	Joe/N8OZ*	Chuck/N8ZA*
Jim/W1IK*	Floyd/W8RO*	

PROGRAMMERS

Dennis/W8DFG	Jim/W1IK	Brad/N8VI
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The Editor is:

Still Going

Joe, K8OEF

We're back! Yep, the same old (entire) editorial staff has returned for another season.

I have little to report, and so much space to do it in. But being a constant listener to the repeater, I heard that the past few months were quite enjoyable—especially Field Day. Wow! What great weather this year. The “Weather Gods” have sure been kind to us. It just couldn't get any better that what was given to us. Somehow, we'll have to try and do better on Pre-Field Day. There is something strange about the early part of May. With the world's weather changing every year, perhaps we'll get some June weather in May.

73 for now.

On The Cheap!

Joe, K8OEF

In the April *Express*, I explained how I try to get the best price for gasoline. This month, it's time to go to the movies.

The AMC theater at Mound and M59 is where my wife and I go. Because she has an AMC card, it's FREE popcorn on Wednesdays. In my pocket, I smuggle in a can of Pepsi.

A small popcorn and pop will set you back about \$7.50 per person—so, save the \$15 and you can both see a movie for FREE (senior pricing) the next time. .

My Word

By Dick Arnold, AF8X

USECA members: I wonder if you realize how lucky you are to have a newsletter editor that does what he volunteered to do: Get out a first class newsletter on time. It is my belief that a newsletter is an important part of a club. The glue that holds it together, so to speak.

I have belonged to a few clubs over the past quarter century and it really steams me when the newsletter doesn't show up and some time later the editor excuses himself saying he didn't have time, or my computer broke...I have heard them all. If a person volunteers to do a job, my thought is, he better damn well do it. No excuses.

Fortunately, Joe takes the responsibility seriously and does an outstanding job, just ask anyone. Joe, thanks from one appreciative member.

[Dick, Thanks for the flowers; people like you help keep the garden growing! — Joe, K8OEF]

Station Grounding For Hams

Bill, N8SA

Now is the time to get our ducks in a row, or our stations ready for winter operating time. So, let's talk about the station ground we have been putting off. This is a very important piece of a complete, and I might add, SAFE station. As hams we ground our stations for two reasons; lightning protection, and RF abatement in the shack. We like to keep the RF in the antennas and feedlines, not in us! Is that new top of the line radio acting squirrely every time you key up? Are you getting buzzed off the key or mike when you transmit? Then you probably have a grounding problem. So, let's make a plan to get it done right.

First we ground all the antennas for lightning protection. Despite the recent price increase of copper, DO NOT cheap out on this! This is your life, your home, your radios. They are important! You need 0 gauge bare copper ground wire to the base of towers to at least three 8 foot ground rods spaced in a triangle and interconnected with the same 0 gauge (single OTT in the vernacular of the trade). This ground should also interconnect to the shack ground system. This will be discussed further down the page.

The shack ground should be at least 8-gauge single strand bare copper, or if you use insulated, it should have as few conductors as possible. RF hates stranded wire. Lots of technical reasons I won't get into here. Memorize this fact and get on with the job. The length of wire from shack to ground system should be less than $\frac{1}{4}$ wave at highest HF frequency used, typically 10m so it should be 8 feet or less. This will take some planning to locate shack this close to ground. When planning your new shack this part needs to be planned FIRST, not last for obvious reasons. This shack ground should go to an eight foot ground rod as its con-

nection point to the rest of the ground system. The tower or antenna ground wires and rods should be interconnected to this point also. Use bare single strand copper for this interconnection and as big as you can get up to and including that 0 gauge. Above 2 gauge there is no single strand. It goes to 7 strand at that point so you can handle it. Use proper silicon bronze grounding connectors for all connections. Connection grease won't hurt either. It is cheap insurance against corrosion, and believe me in Michigan it WILL corrode in the ground. The wire will not corrode enough to worry about it. Just the connection points need be coated. No-ox is the most popular brand, but others will work.

Next we add the counterpoise to our ground system. This is critically important to keep RF out of the shack, and you, while operating and keep your radio's CPU sane. The counterpoise is to balance out the RF in your antenna system and keep you shack at a zero potential at all times. Here is the most important fun fact to commit to memory when dealing with RF and grounding. RF will NOT penetrate soil further than $\frac{1}{2}$ "! SO, the bare copper counterpoise wire we are going to connect to our shack ground rod needs to go on the top of the ground. With pets, lawn equipment, kids, etc this is a balancing act. I prefer to run bare 8 gauge single strand around the foundation on top of the ground. It needs to be at least $\frac{1}{4}$ wave on the lowest frequency you plan to use. It can be used to interconnect all the grounds around the house. You can tuck it under wood chips or filter fabric in the landscaping but NOT under the ground. You can fasten it to the ground by 'staking' it with bent copper wire stakes fashioned out of your counterpoise wire. If you add one about every two feet it will stay in place nicely. I run it right next to the foundation to keep

it away from lawn equipment, etc. If you have metal fencing, run a wire out to it and bond to it solidly. This is as cheap of a counterpoise as you can get, but it should NOT be your only ground. The ground connection resistance is too high to be useful for lightning protection. Stay with lots of ground rods and heavy wire for that!

If you are interconnecting your electrical and cable TV, etc grounds to the shack ground (A MUST!), this counterpoise wire is ideal for doing that. Make it the ground 'bus' to interconnect these ground points. Every piece of equipment that is grounded (cable, electrical neutral, satellite TV) must have it's own rod and then connected to the ground 'system'.

The theory is to let everything in your house that relies on ground to rise together during ground rise (lightning in area). If everything rises together, all is well. It is not the voltage that kills, it is the voltage difference! IF your whole house rises several thousand volts relative to the area 'together' it is no big deal. If your house electrical neutral rises several thousand volts relative to your grounded shack, that is a VERY BIG DEAL! I call it the 'bird on the wire' theory. Notice that birds land on the high voltage electrical wires all the time and are not hurt. That is because their bodies rise to the voltage of the wire. A bird can land safely on 345,000-volt wires safely as long as they do not bridge to ground so there is a voltage difference across their bodies. That is what squirrels do. They jump onto hot wires and their tails are still contacting a grounded or lower voltage surface such as the pole or a tree—then bang—fried squirrel and your lights go out! Birds are much smarter than squirrels. Be the bird!

73 es GL.

[Bill is a Senior Electronic Technician for DTE Energy—Ed.]

See diagram on Page 6.

USECA Meeting Minutes

Board Meeting—June 6, 2006

In attendance:

N8ZA, Chuck	President
N8VI, Brad	Vice-President
KT8F, Ann	Recording Secretary
*KW8Z, Ken	Membership Secretary
W8DFG, Dennis	Treasurer
WB8E, Walt	Board Member
W8IC, Phil	Board Member
N8OZ, Joe	Board Member
W1IK, Jim	Past President
*Absent	



Meeting called to order by the President at 7:30 PM.

Correspondence: None

Motion to accept the minutes of the last BOD meeting made by Phil, W8IC, and 2nd by Dennis, W8DFG, motion carried.

Treasurer's report provided by Dennis, motion to accept made by Ann, KT8F supported by Brad, N8VI, motion carried.

Membership: no change in number of members.

Webmaster: Brad. Recent power outage. Will move website to another place in Troy in the future. Dennis reported that USECA.NET is up for renewal.

Express: Joe, K8OEF – the entire editorial staff is now on vacation. Joe asked about making a hard copy of the Express available at extra cost. Phil made a motion that we add to our application the offer to purchase the Express as a hard copy at an extra cost (approx \$10.00/per year). Members without email will still receive the hard copy at no extra cost. 2nd by Joe, N8OZ, discussion followed, motion passed.

Trustee: Dennis reported on the MARC meeting June 3.

Technical: Phil reported on recent status and equipment. Filters will be installed soon. We now have a donated cabinet for the south site. Repeater is working well at this time. Dennis stated we should start looking for an isolator.

Field Day: Phil reported that we are currently 12A with the GOTA station. Looking for 75 SSB station. Dennis reported on the kitchen and porta-johns. Last minute details discussed.

Swap: Contact Tom, KD8AVF to help out.

Old Business: none.

New Business:

George, K8GEO – Oakland Count is purchasing several good quality orange identifier vests. George displayed one and asked if there would be club interest. He will bring on to the general meeting in case members would want to purchase them individually.

Dennis – discussed dinner following the June Fox hunt. Menu and plans decided.

Motion to adjourn the meeting made by Phil. 2nd by Joe, motion carried, meeting adjourned at 8:36 PM.

Respectfully submitted,
Ann Manor, KT8F, Recording Secretary



General Meeting—June 13, 2006

In attendance:

N8ZA, Chuck	President
N8VI, Brad	Vice-President
KT8F, Ann	Recording Secretary
*KW8Z, Ken	Membership Secretary
W8DFG, Dennis	Treasurer
WB8E, Walt	Board Member
W8IC, Phil	Board Member
N8OZ, Joe	Board Member
*W1IK, Jim	Past President
*Absent	

Meeting called to order by the President at: 7:30 PM.

Introductions were made, new members, visitors and upgrades recognized.

Motion made to accept the minutes as printed in the Express made by George, K8GEO and 2nd by Bob, N8ZY, motion carried.

Treasurer's report given by Dennis, W8DFG. Motion to approve made by Floyd, W8RO and supported by Tom, W8TRC, motion carried.

Membership: Ken, KW8Z: No report

Website: Brad, N8VI; Audio stream up and running live.

Technical report: Floyd, W8RO gave report of activities.

Health and Welfare: Walt reported that a card was going around for Ken, KW8Z.

No Old Business: none.

New Business:

Dennis, W8DFG made a motion for a budget of \$2000.00 for Field Day expenses, seconded by Floyd, W8RO. Discussion followed; vote taken; motion passed.

Motion made by Tom, KD8AVF, seconded by Roger, KB8ULS to adjourn the meeting at 7:50 PM, motion passed.

Respectfully submitted,

Dennis Gaboury, W8DFG
Acting Secretary

**USECA . . . It doesn't get any better
than this—does it?**

Soldering

By Dick Arnold, AF8X

SOLDERING IS THE ART of joining two or more parts with molten metal. Unlike welding, only the solder is melted and adheres to the parts with the aid of flux. Until recently, solder was a mixture of lead and tin. Lead bearing solder is no longer in use because of the detrimental health issues of lead. Lead has already been banned by law in paint, automobile fuel, food cans, automobile body solders, light bulbs and plumbing solder and fixtures. Non lead-bearing solder is replacing lead with a combination other alloys like silver, copper, and tin. Probably all of the solders available now will do the job for you. A word of caution, never, never use acid core solder on an electronic project.

To create a good solder joint, the parts first should be clean and mechanically joined. Solder will not stick to dirty or oily parts and a strong mechanical joint will head off future problems. After the parts are connected, a hot iron should be pressed against all the parts to be joined. After a few seconds solder is added to the joint, not the iron tip, and it should flow around all the parts. When cooled the joint should have a shiny appearance and the solder should completely encapsulate the part. If the part is a component such as a resistor or capacitor being soldered to a circuit board, the connecting wire should be protruding from a pyramid of bright solder. If the connection has a dull look, it is a "cold joint" and should be reheated until the solder flows again. The parts must not move during this process otherwise a good electrical connection will not be made.

After soldering, any excess wire should be clipped off as close to the board as possible. All projects should be examined with the help of a magnifying glass, searching for cold solder joints or missed connections.

Tools: There are literally hundreds of soldering tools on the market. But try to choose the one appropriate for the job at hand. Use an iron that will heat enough to make the connection. Too small or too large wattage irons will make your job much more difficult. I have used many different brands of irons, but I recently received a solder station as a gift, and now I would use nothing else. The variable temperature control and a choice of numerous tips, make it the most useful tool in my shop. Large high-wattage irons or solder guns are not usable for soldering small electronic parts, but are good for making connections on antenna connectors, e.g. PL259s, etc. By the way trying to solder antenna connectors outdoors can be a futile effort. The open-air atmosphere cools the connection so much that a good solder joint cannot be made. If you have no other choice, use a cardboard box or other material to shield the work in progress from the cooling breezes.

Tips: Try to choose a tip that is compatible with the job to be done. For work on circuit boards, I find that a chisel tip works best for me. For a very tight area you may find a conical tip more useful.

Accessories

A strong magnifying glass.

A magnifier visor is useful especially if you wear glasses. It can be used with or without glasses.

A third hand—There are a number of soldering helpers on the market to hold parts to be soldered. Choose one that is heavy enough to resist moving from light pressure.

Results of the USECA Annual Fox Hunt

Phil, W8IC

The June meeting of USECA is traditionally the hidden transmitter hunt. This year was no exception.

The regular meeting started at 7:30 and shortly after 8:00 the group of fox chasers left for their prey.

This year Ann, KT8F and Phil, W8IC were the hidden varmints. The location was the Meijer store at Utica and 15 Mile Road. The infamous white van with 6 element quad was parked on the west side of the building beaming north. This was not enough to stump the hunters.

First to arrive was Ed, KD8CXJ and Tom, KD8AVF at 8:33. An excellent time for a distance of 6.5 miles in city traffic. Second was Brad, N8VI and Don, KC8CPT at 8:42 which started a run of finishers. Floyd, W8RO and

Brian, AA8CY at 8:43, Jerry, N8KLX with his high tech aluminized open box at 8:47 then Larry, KI8HJ and Bob, KZ8N at 8:48.

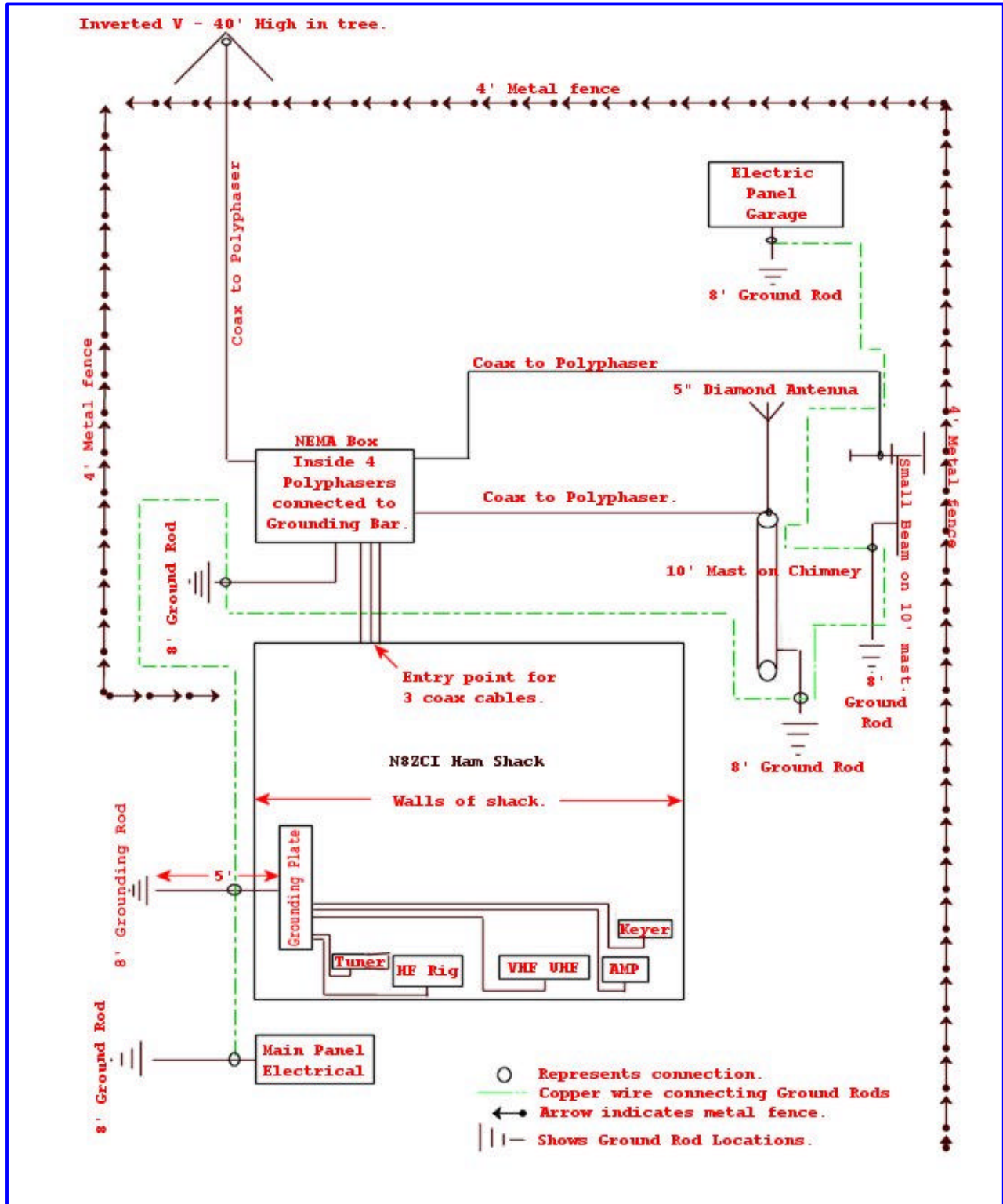
The big crew with no DFing antenna arrived at 8:50. The team included Chuck, N8ZA; Larry, W8SOX; Kim, KD8CNU and Leo, KW8J. All the teams arrived within one hour which is quite a challenge.

The club supplied pizza and pita sandwiches back at the Elks Lodge where the gathering lasted for a couple hours.

Thanks to all who participated.

Remember—there is a fox hunt before each meeting at 6:00 PM.

From Page 3. This was sent to me by N8ZCI asking my opinion. I like to use it as a model grounding plan. Your plan should be as thorough. Note the 'Polyphasers' I did not mention in the article due to the short length I wanted on the article. They are important too. The only critique I gave was to bond the fence to the system.



Residual Noise—From Page 1

ous blockages can be spotted, remove them with a bent paper-clip or with a piece of gum stuck to the end of a pencil. Quite often no problem will be obvious. This is because the rogue signals are, to use a technical term, skulking.

STAGE THREE

Place rig carefully into a washing machine (a clothes washer). Experience has shown that the best results are obtained with a short biological pre-wash, a synthetics wash, a warm rinse and a fairly long spin. Do not use fabric conditioner. If in any doubt at all refer to the washing instructions at the back of the manual for your rig. If you have no washing instructions play safe and wash on a delicate fabric setting.

You may find that the rig will dent the inside of the wash-drum during the spin but don't let the noise deter you. The end result will be worth it.

STAGE FOUR

Obviously when dealing with electrical appliances it is essential that they are absolutely dry before switch on, so it is now time to tumble-dry the rig. A warm dry for about an hour should do the trick. Remove the rig and carefully check underneath any surface-mounted devices to make sure there is no residual moisture. To be absolutely sure shake the rig vigorously for a few seconds and listen for sounds of water slopping around.

If some minor discoloration of the outside casing can be tolerated, the rig may be dried out on top of a slow barbecue.

NOW - THE RESULTS!

Replace all knobs, buttons and connectors. Reconnect to power supply. Switch on. You will be amazed at the difference! No noise! You have cured Residual Noise Pollution.

Your DX-ing will never be the same again!

—Submitted by Arpad, WY8M

Not All Hollywood Actors Are Morons

"Any girl can be glamorous," Hedy Lamarr once said. "All she has to do is stand still and look stupid." The film star belied her own apothegm by hiding a brilliant, inventive mind beneath her photogenic exterior. In 1942, at the height of her Hollywood career, she patented a frequency-switching system for torpedo guidance that was two decades ahead of its time.

Hedy Lamarr was born in Vienna in 1914 as Hedwig Eva Maria Kiesler. She went to Max Reinhardt's famous acting school in Berlin during her late teens, and in 1933 she showed the world her acting skills and most of herself in the film *Extase* (*Ecstasy*), which quickly became notorious for its extensive nude scenes. The movie played in America after severe cutting, and in 1937 its leading lady went to Hollywood. Louis B. Mayer, of MGM, hired her and gave her the name Lamarr. Some people thought Hedy to be the most beautiful woman in Hollywood, but as an actress she was overshadowed by heroines like Ingrid Bergman and Katharine Hepburn. In 1966, she published her autobiography, *Ecstasy and Me*.

Hedy Lamarr married Fritz Mandl, the first of six husbands, in 1933. During their marriage, which broke up in 1937, Madame Mandl was an institution in Viennese society, entertaining—and dazzling—foreign leaders, including Hitler and Mussolini. Her husband specialized in shells and grenades, but from the mid-thirties on he also manufactured military aircraft. He was interested in control systems and conducted research in the field. His wife clearly learned things from him, because she and her co-inventor, George Antheil, later went on to invent the torpedo guidance system that was two decades before its time.

Hedy Lamarr's co-inventor, George Antheil, was born in Trenton, New Jersey, in 1900. His parents were from East Prussia. After studying music at what is now the Curtis Institute, in Philadelphia, he went to Europe to pursue a career as a concert pianist, heading first to Berlin and then settling in Paris in 1923. He became one of the top avant-garde composers of the time, writing and playing machinelike, "mechanistic," rhythmically propulsive pieces with names like *Airplane Sonata*, *Sonata Sauvage*, *Jazz Sonata*, and *Death of Machines*. His Ballet *Méanique* was scored for sixteen player pianos, xylophones and percussion and was first performed in Paris in June 1926, in a version that had only one player piano but also had electric bells, airplane propellers and a siren. It caused an uproar.

Antheil knew practically everybody in Paris's literary, artistic and musical circles, but in 1933 he returned permanently to the United States. He became a film composer in Hollywood and a writer for *Esquire* magazine, producing a syndicated advice-to-the-lovelorn column and articles about romance and endocrinology. He even published a book titled *Every Man His Own Detective: A Study of Glandular Endocrinology*. In 1939 he set an article to *Esquire* about the future of Europe that proved impressively accurate: It predicted that the war would start with Germany invading Poland, that Germany would later attack Russia, and then the United States would be drawn into the conflict.

He met Hedy Lamar in the summer of 1940, when they were neighbors in Hollywood and she approached him with a question about glands: She wanted to know how she could enlarge her breasts. In time the conversation came around to weapons, and Lamarr told Antheil that she was contemplating quitting MGM and moving to Washington, D.C., to offer her services to the newly established National Inventors Council.

—Continued on Page 8

Hollywood Actors—From Page 7

They began talking about radio control for torpedoes. The idea itself was not new, but her concept of "frequency hopping" was. Lamarr brought up the idea of radio control. Antheil's contribution was to suggest the device by which synchronization could be achieved. He proposed that rapid changes in radio frequencies could be coordinated the way he had coordinated the sixteen synchronized player pianos in his Ballet Mécanique. The analogy was complete in his mind: By the time the two applied for a patent on a "Secret Communication System," on June 10, 1941, the invention used slotted paper rolls similar to player-piano rolls to synchronize the frequency changes in transmitter and receiver, and it even called for exactly eighty-eight frequencies, the number of keys on a piano.

Lamarr and Antheil worked on the idea for several months and then, in December 1940, sent a description of it to the National Inventors Council, which had been launched with much fanfare earlier in the year as a gatherer of novel ideas and inventions from the general public. Its chairman was Charles F. Kettering, the research director of General Motors. Over its lifetime, which lasted until 1974, the council collected more than 625,000 suggestions, few of which ever reached the patent stage. But according to Antheil, Kettering himself suggested that he and Lamarr develop their idea to the point of being patentable. With the help of an electrical engineering professor from the California Institute of Technology they ironed out its bugs, and the patent was granted on August 11, 1942. It specified that a high-altitude observation plane could steer the torpedo from above.

Two pages of drawings from Lamarr and Antheil's patent. Note the player-piano-like slotted paper on the second sheet. Markey is the name of Hedy Lamarr's second of six husbands.

Putting the idea into practice was not so simple. Despite the enthusiasm that Antheil said Kettering expressed, others were skeptical. One examiner at the Inventors Council doubted the clockwork mechanism that moved the perforated tape



Hedy Lamarr

could be accurate enough. Antheil lobbied for support for further research from among others, William C. Bullitt, Special Assistant to the Secretary of the Navy. He argued that the Germans were superior to the Americans in naval technology and that something had to be done about it. He seemed driven in part by an urge to prove his patriotism after all his years in Europe. Hedy Lamarr meanwhile demonstrated her loyalty by raising seven million dollars in a single evening selling war bonds.

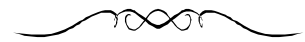
Despite Antheil's lobbying, the Navy turned its back on the invention, concluding that the mechanism would have been too bulky to fit into a torpedo. Antheil disagreed; he insisted that it could be made small enough to squeeze into a watch. And he thought he knew why the Navy was so negative: "In our patent Hedy and I attempted to better elucidate our mechanism by explaining that certain parts of it worked like the fundamental mechanism of a player piano. Here, undoubted, we made our mistake. The reverend and brass-headed gentlemen in Washington who examined our invention read no further than the words 'player piano. 'My god,' I can see them saying, 'we shall put a player piano in a torpedo.'"

In other words, it was a culture clash: the thick-headed brass hats were incapable of considering the idea that musical technology could play any part in a complicated piece of weaponry. But Antheil's explanation is too simple; the invention had other problems. Describing them requires looking at other developments in torpedo control at the time, especially in Germany.

In the United States Hedy Lamarr and George Antheil, shunned by the Navy, no longer pursued their invention. But in 1957, the concept was taken up by engineers at the Sylvania Electronic Systems Division, in Buffalo, New York. Their arrangement, using, of course, electronics rather than piano rolls, ultimately became a basic tool for secure military communications. It was installed on ships sent to blockade Cuba in 1962, about three years after the Lamarr-Antheil patent had expired. Subsequent patents in frequency changing, which are generally unrelated to torpedo control, have referred to the Lamarr-Antheil patent as the basis of the field, and the concept lies behind the principal anti-jamming device used today, for example, in the U.S. government's Milstar defense communication satellite system.

Information Source: American Heritage of Invention & Technology, Spring 1997, Volume 12/Number 4

—Submitted by Dick, AF8X



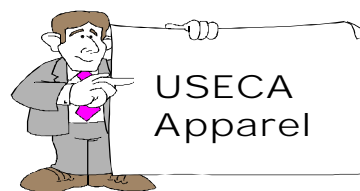
(That's us—U S of A)

USECA Club Liaison

MONTH	DATE	EVENT
SEP	9	GRAHamfest 2006 Grand Rapids Amateur Radio Association - Grand Rapids (Lowell), MI Kent County Fairgrounds 225 South Hudson http://www.w8dc.org/swap.htm Talk-In: 147.26+ (PL 94.8); 146.52 Contact: Jack Amelar, NY8D. Phone: 616-897-6885. Email: grahamfest06@w8dc.org
SEP	17	Adrian ARC Adrian, MI Lenawee County Fairgrounds 602 Dean Street http://www.w8tqe.com/ Talk-In: 145.370 (PL 85.4) Contact: Margie Willey, KB8TMM. Phone: 517-467-6303. Email: maggie214@frontiernet.net
SEP	17	Trunk Sale – Hamfest Shiawassee ARA (SARA) Owosso, MI Bennington Township Hall 5849 South M-52 Talk-In: 147.02 MHz Input + 600 kHz (100 Hz) Contact: Don Warner, WB8GUS. Phone: 810-266-4897. Email: wb8gus@arrl.net
OCT	8	Kalamazoo Hamfest Kalamazoo ARC & Southwest Michigan AR Team Kalamazoo, MI Kalamazoo County Fair Grounds. "Exhibition Hall E" 2900 Lake Street http://www.kalamazoohamfest.com/ Talk-In: 147.640/147.040 (PL 94.8) Contact: Jim Simons, N8IJH. Phone: 269-388-4865 (voice mail). Email: info@kalamazoohamfest.com
OCT	21	Great Lakeshore Super Swap Holland ARC Holland, MI Harbor Lights South Campus 3600 152nd Avenue http://www.hollandarc.org Talk-In: 147.060 (PL 94.8) Contact: Sue Seidelman, KC8RQS. Phone: 616-394-9821. Email: swap@hollandarc.org
OCT	22	Blossomland Blast. Blossomland ARA Berrien Springs, MI St. Joe Kickers Sport Club M-139 at Linco Road http://www.blossomlandara.org Talk-In: 146.82(-) & 146.72(-) Contact: Gary Wallis, KB8VIM. Phone: 269-429-3629. Email: w8mai@comcast.net
OCT	29	USECA Swap Utica Shelby Emergency Communications Association Sterling Heights, MI Polish-American Century Club 33204 Maple Lane Drive http://www.useca.net Talk-In: 147.180 + (PL 100) Contact: Tom Tincknell, KD8AVF. Phone: 586-651-7239. Email: hamfest@k8uo.com
		<i>Submitted by David, KC8TTQ</i>

USECA VE Testing

Testing will be the FIRST Thursday of the month from September through June. Joe, N8OZ will have the CVE duty. No pre-registration is needed or wanted. Test Fee is \$14.00. Applicants need copies and originals of CSCE's and/or license. There is no copy machine at the Elks; (there is none close by). Starting time is 7:00 p.m. — please do not arrive earlier. Walk-ins are welcomed. Test site is at the Mt. Clemens Elks, 179 S. Main St., Mt. Clemens. If testing, you must have the following: picture ID (or birth certificate); and a copy of your current license or completion certificates, if any.



Jackets—\$45.00 • Sweatshirts—\$25.00
 Polo Shirts—\$22.00 • Caps—\$6.00
 (2X & 3X—Additional Charge)
Contact: Chuck, N8ZA
At Meetings or Phone (586) 557-4983

The *USECA EXPRESS* is published monthly (except July and August), by the UTICA SHELBY EMERGENCY COMMUNICATION ASSOCIATION, INC., of Macomb County, Michigan. Club meetings are held on the second Tuesday of each month (except July and August), 7:30 p.m., local time, at the Elks Club, 179 S. Main (between Church and Robertson), Mt. Clemens, Michigan. *Visitors are always welcome.* Articles for the *EXPRESS* should be submitted to the editor no later than the night of the club meeting for publication in the following month's edition. **The articles within are those of the author and not necessarily endorsed by USECA.** Material contained in the *EXPRESS* may be reprinted provided credit is given to the *USECA EXPRESS* and the author, except material published by permission of a copyright holder. The awards for "Excellent" (1994) and four times "Superior" (1995, 1996, 1997 and 1998) were received from ARNS (Amateur Radio News Service). [Note: ARNS has disbanded.]

USECA Cork Board

? Radio Items?

ALS 600 Solid State Base Amp. No tune 1.5 to 22 MHz. List \$1129.99; sell for \$1000. (Page 86 in AES catalog) Contact Jerry, K8CFY at: k8cfy@k8uo.com.

GENERAL Radio Freq. Measuring Equipment; 2-6' cabinets; w/all frequency equipment; w/manuals; lots of electronics; \$250.

HEATHKIT Transceiver model HW-16; w/manual. 80-40 & 15 meters; no crystals; \$35.

HEATHKIT SWL radio model GR-81; 160-80-40-20 meters; w/manual \$50.

KENWOOD Linear Amp. 1000 watts, model TL-922A; 160-15 meters; \$1000.

Contact Jose, K8LJM; (586) 792-4602.

★HUSTLER 4-BTV Vertical antenna. 10-15-20 & 40 meters. In excellent condition, \$75.00. af8x@arrl.net or home (586) 791 3595, cell 322 4106. Dick

KENWOOD TS-140S. Great condition, in original box with operator and service manual. Only \$395!

LARSEN dual band glass mount mobile antenna model: KG-2/70. It is used, but in good condition. Only \$45!

RADIO Chest Pack. This is an all black Lone Peak Designs radio chest pack. You can strap your HT to your chest just like the pros do! These are the very same chest packs used by public service and search and rescue personnel. Many are also used by Hams during public service activity. It is brand new and costs only \$30! The normal price is close to \$35.

Contact Floyd, W8RO at w8ro@k8uo.com or (248)-431-7769.

★MFJ-1786. 10-30 MHz Hi-Q Deluxe Loop Antenna. No control cable is needed. Fast/Slow tune buttons and built-in two range Cross-Needle SWR/Wattmeter let you quickly tune to your exact frequency. \$150.00 af8x@arrl.net or 586 791 3595.

2 REPEATERS. 2 meter and 440. Yaesu Vertex VXR 5000s. CAT 1000 controllers with DVR and WX interface. Wacom cans. Peet Bros weather station. Cabinet. Contact Gerry, K8GER (989) 826-3196 or k8ger@k8uo.com.

WANTED: Motorola Expo batteries in GWO. Contact Floyd, W8RO at (248) 431-7769 or w8ro@k8uo.com

? Miscellaneous Items?

CHEVROLET, 2003 Trailblazer 4WD (W8RO/M). Excellent condition, loaded. Sandlewood exterior, Tan interior. 29K miles. Only \$19,995! For more details, contact Floyd, W8RO at (248) 431-7769 or w8ro@k8uo.com.

FREE! To a good home: Epson Apex L-1000 Dot Matrix Printer (24 pin). Very good condition with manuals and drivers! Contact Floyd, W8RO at (248) 431-7769 or w8ro@k8uo.com.

SONY Trinitron Multiscan E540 21" CRT Computer Monitor with manual; like new; 2 years old. \$195. Contact Joe, K8OEF at (586) 781-0050.

FOR SALE

COMET SBB5NMO – BRAND NEW! Dual-band 2M/440, blacked-out "stealthy" antenna, with tilt-over feature so you can get in the garage, I bought two from ComDac at the last swap but only needed one (AB8MJ's truck); I paid \$60 and so will you!

Archer Video Selector – Radio Shack Cat# 15-1261, has 7 F-connectors on the back, couple switched up front; \$5.

Archer Special Effects Switcher – Radio Shack Cat# 15-1274, 110V; \$5.

SPECO PAT-20 – 20W audio PA amp, with mic; \$10.

Micronta Power Supply – Radio Shack Cat# 22-124, 12VDC, 2.5A, manual; \$10.

Realistic WX Radio – Radio Shack Cat# 12-156, pocket weather radio, built-in telescopic ant. \$10.

Optimus AM/FM – Radio Shack Cat# 12-794, pocket radio, works; \$5.

TrippLite Power Supply – model PR-40, label sez "13.8V @ 40A", no meters, ¼"-20 threaded power lugs on the back, power switch on the front, yep, it's heavy! \$100.

Heathkit HS1661 – external speaker, no cord, good condition; \$50.

American Electrola DXC-100 – rare tabletop radio, only 2000 ever made, all solid state, American made with American components, allegedly the last USA-made SW radio actually made in the USA, HF receiver up to 30 MHz + FM '3M' band, AM/FM/SW, digital LED display, direct entry keypad, wooden case, front firing speaker, large internal wire loop antenna, long telescopic antenna, ext. jack, power supply, original owners manual; \$95.

Radio Shack Micronta 21-525B – SWR/Field strength meter, sold "as is"; \$10.

ROLODEX RT-8214 – electronic organizer, 2Mb of memory, touch screen like PDA, software, pc cable for backups, just got it but looks like I won't use it, so, for sale; \$20.

MFJ-915 – RF Isolator, SO-239 (PL-style) connectors, manual, like new; \$20.

1999 BMW R1100S – email for details and sale flyer; \$5900.

Adaptor – RCA-style to PL style (SO-239), have a few; \$1.

1/4" Phono – all metal male phono plug, use for mono headphones and such; \$1.

Yaesu MH-34 – Speaker mic for Yaesu HT's, single pin 4-conductor style, rotatable lapel clip, like new; \$20.

Kenwood SMC-33 – Speaker-mic for Kenwood HT's, two-pin style, right angle connector, has three programmable buttons across top, lock switch on back, rotatable lapel clip; \$45.

Computer Speakers – amplified pc speakers, used only 10 minutes; \$5.

Dummy Load – "twin tower" dual massive ceramic resistors, looks like 50+W easy; \$15.

1N3085 – huge 100V 150A recovery diodes, have one left; \$10/each.

CB Antenna – about 26" long, base loaded, base load is tunable w/2 adjustment rings, 3/8" style mount; \$5.

Cell Phone Mobile Power Cord – for cell phone with 4.8V batt., DC coaxial plug on phone end; \$5.

Power Supply – switching PS, 12-15 VDC, 16A, works, you wire it up; \$20.

Wall Warts – various voltages, email with needs; \$2 to \$5.

Duckies – UHF duck about 6" with BNC, \$5; dual band 2M/440 "Icom" style about 6" with BNC, \$15; 11 Meter black rubber duck with right angle PL259, \$5.

K-40 10/11M Whip – 4' fiberglass, black, tunable, substitute for original K-40 stainless whip & base load, no mount or coax just the antenna; \$5.

K40 – 10/11M base-loaded antenna with SS whip, no base for it just antenna; \$10.

Regency CB-501 – 40 ch CB radio, with mic, "as is"; \$10.

Colt 220 – 40 ch CB radio, with mic and power cord, "as is"; \$10.

Contact Arpad, WY8M at: wy8m@arrl.net or, 147.180+ MHz (100 Hz PL).

★New or changed this month.

Please notify the editor to have item(s) added and/or removed.

This Cork Board is for club members only and it's free!

Name Badges

WITH THE OFFICIAL USECA LOGO

CONTACT LAURA — (586) 749-4561

USECA APPLICATION



Rev. 9/06

DATE _____ NEW RENEWAL MAIL PRINTED NEWSLETTER
 CALL _____ CLASS _____
 NAME _____
 STREET ADDRESS _____
 CITY _____ STATE _____ ZIP _____
 TELEPHONE # _____ PRINT # IN ROSTER NO
 BIRTHDATE _____ EMAIL ADDRESS _____
 MEMBER: **ARRL** YES NO **RACES** YES NO

FOR FAMILY MEMBERSHIPS ONLY:

CALL _____ CLASS _____
 NAME _____
 BIRTHDATE _____
 MEMBER: **ARRL** YES NO
RACES YES NO

CALL _____ CLASS _____
 NAME _____
 BIRTHDATE _____
 MEMBER: **ARRL** YES NO
RACES YES NO

Annual Membership Dues: Regular: \$20 — Family: \$30 — Mail Printed Newsletter, ADD \$10.00
 Applications can be given to the Membership Secretary at monthly meeting or mailed.
 Please make check payable to: **USECA** — Address: **P.O. Box 46331, Mt. Clemens, MI 48046**
(Allow 4-6 weeks for processing.)

USECA reserves the right to accept or reject New or Renewal Memberships.

Local Area FM Nets

DAY	TIME	CLUB	FREQ.
SUN	1:00 pm	USECA/Information	147.180
SUN	8:00 pm	USECA/Traders/Helpers	147.180
SUN	9:00 pm	HPARC/Info	146.640
SUN	9:00 pm	Garden City ARC	146.860
SUN-SAT	10:15 pm	S. E. Michigan Traffic Net	145.330
MON	7:30 pm	SATERN	147.180
MON	8:00 pm	MECA/Info	147.200
MON	8:00 pm	GMARC (PL 123)	443.075
MON	9:00 pm	USECA/Morse Code Class	147.180
TUE	9:00 pm	Motor City Radio Club	147.240
WED	9:00 pm	ARPSC/Info	145.490
THU	8:00 pm	RACES/ARES	147.200
THU	8:30 pm	LCARC/Info	147.080

VHF PL'S — 100 Hz

On The World Wide Web
 USECA Home Page

WWW.USECA.NET

Local HF Nets

DAY	TIME	CLUB/DESCRIPTION	FREQ.
MON	7:30 pm	LCARC/15 Meter CW	21.165
MON	9:00 pm	LCARC/15 Meter Phone USB	21.395
WED	7:00 pm	USECA/6 Meter Phone USB	50.150
THU	7:30 pm	LCARC/10 Meter Phone USB	28.435
THU	9:00 pm	USECA/15 Meter Slow CW	21.140
FRI	10:00 pm	USECA/80 Meter CW	3.710
FRI	11:00 pm	USECA/10 Meter Phone USB	28.425

Listings in **BOLD** are USECA club nets, but ALL ARE WELCOME!

Net Ops Schedules

2-METER NETS

	SUN. 1 PM	SUN. 8 PM**
WEEK	147.180 MHz	147.180 MHz
1	-OPEN-	W1IK
2	KT8F	N8EB
3	-OPEN-	W8RIT
4	-OPEN-	KW8Z
5*	WB8E	-OPEN-

*If applicable

**Traders/Helpers Net

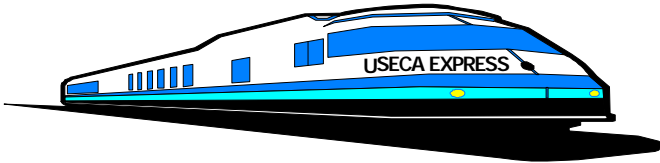
NCO's—If you're unable to take your net please get a replacement or contact Brian, KC8DIR (586) 749-4561—Don't wait!

USECA

UTICA SHELBY EMERGENCY COMMUNICATION ASSOCIATION, INC.
P.O. Box 46331 • Mt. Clemens, MI 48046

PLACE
STAMP
HERE

FIRST CLASS MAIL



The USECA Express
Heading Your Way!

SEPTEMBER 2006

"The Happenin' Club"

Club Activities

MONTH	DATE	TIME	EVENT
SEP	7	7:00 pm	VE Test Session
SEP	12	7:30 pm	General Meeting
SEP	22-24		Algonac Campout
OCT	5	7:00 pm	VE Test Session
OCT	10	7:30 pm	General Meeting
OCT	29	8:00 am	USECA 21st Annual Swap
NOV	2	7:00 pm	VE Test Session
NOV	7	7:30 pm	General Meeting (Nominations)
DEC	2	7:00 pm	USECA 19th Annual Christmas Party
DEC	7	7:00 pm	VE Test Session
DEC	12	7:30 pm	General Meeting (Elections)

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