

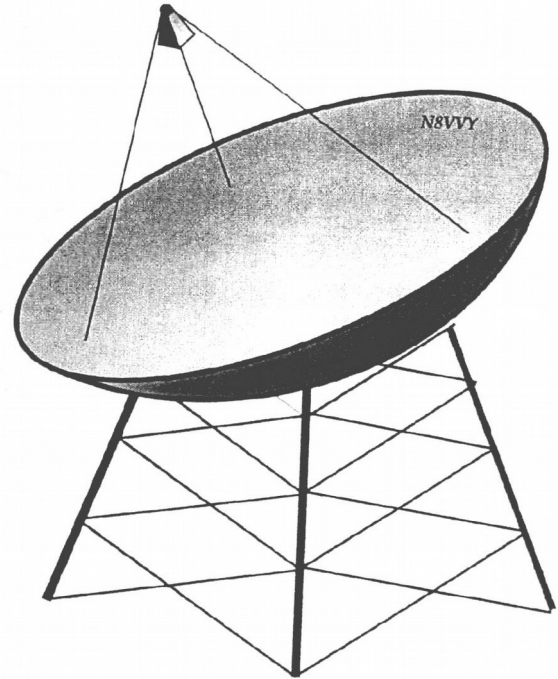
ANOMALOUS PROPAGATION

Newsletter: *The Midwest VHF/UHF Society*

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Annual membership is \$ 12.00. Make checks
payable to Joe Muchnij, N8QOD.



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Beacons: 1296.079 **W8KSE** EM79ur Dayton, OH---- 2W to Big Wheel at 800' AGL.

Listen for the **K9AYA Beacons** at EM79qk, 2W @ 10,368.000 MHz
 both are copied by K4TO daily. 1W @ 5,760.000 MHz

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Hamvention May 18,19,20 2018 Additional new building;

**Coming up later this year: Microwave Update: Oct 11, 12, 13
 In Dayton Oh.**

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DE N8ZM: Now that we have passed into the new year, it is time for MUD 2018 preparations to begin in earnest. To that end, we have received the seed money from the folks in CA, and are starting to work on updating the web site. Also, the menu for the lunches and banquets are being determined. Lots of good stuff happening. Of course, MUD is all about presentations and papers, so please contact N8UR with your submissions. The deadline for those will sneak up quickly, which is to say I don't off hand know what it is at this moment, but I know it is typically well before the conference so that the books can be printed. So get busy now on that paper and presentation to share what you have learned about microwaves. Don't be bashful; you probably have some nugget of knowledge that no one else has put into words yet. Be the first. And even if you aren't the first, the rest of us will be happy for the refresher.

By the time you read this, the January VHF contest will be history, and hopefully you all got on the air and handed out some points, or even better, competed for recognition as a top competitor. After all, using the bands is the only way we can justify keeping them. It's an old argument but I haven't heard a better one yet.

OK, you probably saw the announcement on the front page about the dues increase for those who wish to receive paper copies of Anom Prop. This was voted on at the last meeting as being a generally good idea to help keep us solvent, assuming we can keep printing costs under control. We can't do much about the USPS, of course; they'll get what they need to do the job and I think I've heard that they are planning another increase soon. I don't get a lot of heartburn over the cost of postage like some do as it does cost a lot to move zillions of pieces of mail each day, even if much of it is 'junk'. We could argue about the cheap rates the bulk mailers get for that crap but it is income to the postal service which has to help keep first class postage down. Yes, there are other issues but this ain't the place for that discussion.

Work on getting the 2m & 432 beacons on the air has slowed a bit due to the cold weather, but as soon as we can get a warm and not too windy day, W8RKO and I will be headed to the Englewood water tank to get things installed.

If you happen to be interested in building your own HF and VHF amplifiers, DARA will once again host 40-fest on April 21st at the Bellefontaine Road clubhouse. This was a well-attended gathering last year with several good presentations, and the organizers have already put together another fine set of talks, to be shared in a later edition of Anom Prop.

Time to call it quits for this month. I hope to see you on the 26th at the MCL!

de N8ZM.

Comments on the Paper Journal.

About two thirds of our members get the newsletter by e-mail. But we still send presently 39 copies by mail. Our club, being too small, does not qualify for a Postal discount so we pay first class postage which presently amounts to \$.49; this adds up for the year to \$ 4.41. And this is just the postage. The cost for copying has also gone up, now 80c total for a single copy. So cost for copying adds up for the year to \$ 7.20, which would make the final amount \$11.61, eating up almost all of the yearly dues. So, at the picnic last year we decided to introduce an additional fee of a few extra \$\$ (I would suggest \$5.-) additional to the regular fee of \$12, which BTW has not changed in many years for a paper copy membership.

For a few years we had the advantage of getting the newsletter printed for free. But that advantage ran out. There is some good news however. Over the years printers have gotten faster more versatile and cheaper, so individuals now can print the 39 copies in under 2 hours. Tom, N8ZM has done this for some issues and I have done one so far also. Putting a price tag for expenses incurred I would estimate this to about \$5. Having also such a new printer I will gladly contribute it and the materials for some of the months. Gerd, WB8iFM

This and That 1-2018

Tax Time. "The only difference between a tax man and a taxidermist is that the taxidermist leaves the skin." [Mark Twain]

Peace. I think people want peace so much that one of these days governments had better get out of the way and let them have it. [Dwight D. Eisenhower]

Dark Sky Benefits. A dark sky can solve sleeping problems for people and help nocturnal wildlife. It further boosts home values and attracts tourists. [Keith Ridler, AP]

Self Driving Car. "From a witness perspective it was the most boring drive I've ever had in my entire life." said Andrew Bremer, deputy director of strategic initiatives, Ohio DOT, who rode along with the standby driver of the test car. [Lynn Hulsey]

The New Reality. Across the world, more people are now obese than underweight. [N.Y.T.]

Deception. When the world largest diamond was transported from Africa to England, an elaborate secure journey by sea was publicized as a ruse. The real diamond was simply posted by mail.

DX Proposition. This was not so long ago in the news: a huge pile of garbage was found floating near the uninhabited "Henderson Island" of fourteen square miles. [Gerd]

Military Action. "Whether in Korea, Uganda, Sudan, the Middle East, or anywhere in the world-- for every soldier killed , nine civilians perish from stray bullets, bombs, landmines, and deliberate depravation of food and medical care. [Carter Center/ Atlanta]

Don't worry about avoiding temptation. As you grow older, it will avoid you! [Winston Churchill]

Maybe it's true that life begins at 50 ... But everything else starts to wear out, fall out, or spread out... [Phillis Diller]

By the time a man is wise enough to watch his step, he is too old to go anywhere. [Billy Crystal]

The Irish ignore anything they can't drink or punch. [Old Saying]

Frankenstein. Scientist to God: "We don't need you anymore, the mystery of creating life has been fathomed." "Really?" says God, "let's see you build a man, as I did out of clay." "Sure", replies the scientist, bends down to grab a handful of dirt. "Not so fast." says God, "get your own dirt." [from Ohio Chautauqua 2017]

Experience...is the only source of knowledge. [Albert Einstein]

Problems.. We cannot solve problems with the same thinking we used when we created them. [Albert Einstein]

'Instantly rechargeable' battery could change the future of electric cars.

WEST LAFAYETTE, Ind. – A technology developed by Purdue researchers could provide an “instantly rechargeable” method that is safe, affordable and environmentally friendly for recharging electric and hybrid vehicle batteries through a quick and easy process similar to refueling a car at a gas station.

A battery has three parts: a cathode, an anode and the electrolyte. The Purdue researchers want to drain the electrolyte from the run down battery, regenerate it and fill it back in. That’s it in a nutshell.

Of course, you might have to take the used electrolyte and recharge it at a special facility. Recharged electrolyte is filled like you would be filling gas into a combustion car.

In other words: instead of charging the battery you swap the spent electrolyte for fresh one.

Propagation ReportOperating System going haywire!

SB PROP @ ARL \$ARLP032
ARLP032 Propagation de K7RA

ZCZC AP32
QST de W1AW
Propagation Forecast Bulletin 32 ARLP032
>From Tad Cook, K7RA
Seattle, WA August 15, 2017
To all radio amateurs

SB PROP ARL ARLP032
ARLP032 Propagation de K7RA

Sorry for the long delay in getting this bulletin out, which normally occurs on Friday, but is now being released on the following Tuesday. This was the result of an automatic operating system update gone bad, which has me now actively considering open source alternatives. It still isn't fixed. ..

‘Whatever Happened to the Metric System?’

Book by John Bemelmans Marciano

Review by Amir Alexander Aug. 2014

In the 1970s, children across America were learning the metric system at school, gas stations were charging by the liter, freeway signs in some states gave distances in kilometers, and American metrication seemed all but inevitable. But Dean Krakel, director of the National Cowboy Hall of Fame in Oklahoma, saw things differently: “Metric is definitely Communist,” he solemnly said. “One monetary system, one language, one weight and measurement system, one world — all Communist.” Bob Greene, syndicated columnist and founder of the WAM! (We Ain’t Metric) organization, agreed. It was all an Arab plot “with some Frenchies and Limeys thrown in,” he wrote.

Krakel and Greene might sound to us like forerunners of the Tea Party, but in the 1970s meter-bashing was not limited to right-wing conservatives. Stewart Brand, publisher of the Whole Earth Catalog, advised that the proper response to the meter was to “bitch, boycott and foment,” and New York’s cultural elite danced at the anti-metric “Foot Ball.” Assailed from both right and left, the United States Metric Board gave up the fight and died a quiet death in 1982.

In his entertaining and enormously informative new book, “Whatever Happened to the Metric System?,” John Bemelmans Marciano tells the story of the rise and fall of metric America. With a keen ear for anecdotes and a sharp eye for human motivations, Marciano brings to life the fight over the meter, its champions and its enemies. The 1970s bookend his narrative, but the reader soon finds the struggle lasted not a decade but centuries. And in what was to me the book’s greatest revelation, the meter — that alleged vehicle of international Communism — turns out to be American through and through.

The father of American metrication was none other than Thomas Jefferson, who in the 1780s turned his attention to replacing the menagerie of doubloons, pistoles and Spanish dollars then in use in the states. Jefferson proposed minting a new dollar, but whereas the European coins were divided into halves, eighths, sixteenths, etc., the American coin would be divided into tenths, hundredths and thousandths. When Jefferson’s plan was approved by Congress, the United States became the first country to adopt the decimal system for its currency.

That money is related to measurement might seem counterintuitive today. But as Marciano points out, until very recently the value of coins was ultimately dependent on their weight in gold or silver, which means the divisions of a currency imply a division of weight. And so, when Jefferson arrived in Paris as a diplomat in 1784, he joined forces with French luminaries in promoting a complete reform of weights and measures. Their opportunity came only a few years later, when at the height of the French Revolution its leaders cast away all traditional measures and replaced them with the new meter, kilogram and liter. Jefferson, who had returned home in 1789, was convinced the new system would be promptly adopted in America.

It didn’t turn out that way. As France descended into terror and war, the metric system became entangled in a worldwide struggle over its legacy. To its supporters it stood for reason and democracy; to its detractors, godlessness and the guillotine. It was not until the aftermath of World War II, when new global institutions were established and a host of new nations adopted the meter, that its place as the near-universal measure was secured.

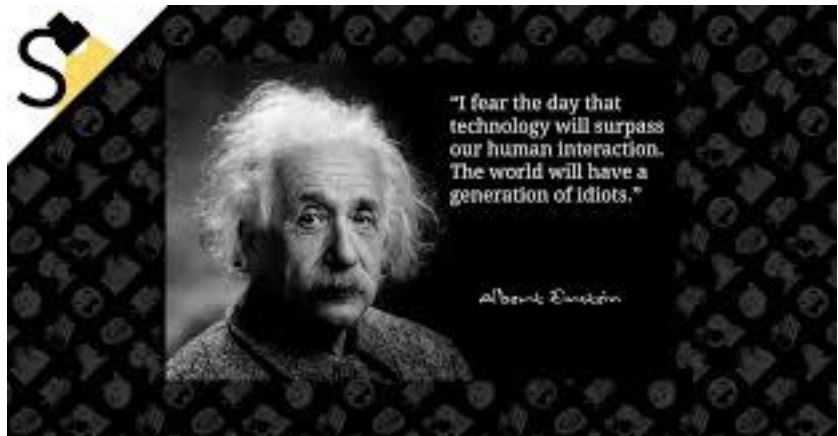
In America, however, repeated efforts at metrication, from Jefferson to Jimmy Carter, were scuttled by a formidable combination of hostility and indifference.

A Century of General Relativity— the Theory that revolutionized Physics

This year (2016) marks the centennial of one of the most famous and successful scientific ideas of all time—Albert Einstein’s **general theory of relativity**. The theory, which turned the traditional notion of gravity and space on its head, revealed that gravity is not a pull on matter as we thought but rather a simple consequence of misshapen spacetime. This revolutionary idea deformed the landscape of physics itself, and 100 years later the threads of scientific inquiry are still following along the contours it created.

Quote: “I fear the day that that technology will surpass our human interaction. The world will have a generation of idiots.”

Albert Einstein.



To celebrate this anniversary *Scientific American* dedicated its [September 2015 issue](#) to this topic. The special package included articles on [how Einstein put the idea together](#), what [the physicist got wrong](#), scientists’ [quest to carry on Einstein’s dream](#) of a unified theory of physics and much more. Our Web site also published special online features such as an [interactive graphic](#) showing relativity’s impact on later research, a [quiz on Einstein](#), the real story behind the [equation \$E = mc^2\$](#) , and others.

Now is a good time to take a look back at big ideas like general relativity because physics is, once again, facing daunting challenges. The mysteries of what makes up the invisible dark matter rife throughout the universe and the mystifying dark energy that seems to be accelerating the expansion of the cosmos stand unsolved. To answer these questions science may need another breakthrough on the scale of general relativity. Clues may come from the Large Hadron Collider (LHC) outside Geneva, which recently began [colliding protons together at unheard-of energies](#). Intriguing hints of [a new particle](#) at the LHC reported in December spurred hopes the machine may make a significant discovery in 2016. Revamped [experiments aiming to detect dark matter](#) particles directly could also turn up results very soon.—Clara Moskowitz

Eiffel Tower (1000')

In 1889, Paris hosted an Exposition Universelle (World's Fair) to mark the 100-year anniversary of the [French Revolution](#). More than 100 artists submitted competing plans for a monument to be built on the Champ-de-Mars, located in central Paris, and serve as the exposition's entrance. The commission was granted to Eiffel et Compagnie, a consulting and construction firm owned by the acclaimed bridge builder, architect and metals expert Alexandre-Gustave Eiffel. While Eiffel himself often receives full credit for the monument that bears his name, it was one of his employees—a structural engineer named Maurice Koechlin—who came up with and fine-tuned the concept. Several years earlier, the pair had collaborated on the Statue of Liberty's metal armature.

Did You Know?

The base pillars of the Eiffel Tower are oriented with the four points of the compass. Eiffel reportedly rejected Koechlin's original plan for the tower, instructing him to add more ornate flourishes. The final design called for more than 18,000 pieces of puddle iron, a type of wrought iron used in construction, and 2.5 million rivets. Several hundred workers spent two years assembling the framework of the iconic lattice tower, which at its inauguration in March 1889 stood nearly 1,000 feet high and was the tallest structure in the world—a distinction it held until the completion of [New York City's Chrysler Building](#) in 1930. (In 1957, an antenna was added that increased the structure's height by 65 feet, making it taller than the Chrysler Building but not the Empire State Building, which had surpassed its neighbor in 1931.) Initially, only the Eiffel Tower's second-floor platform was open to the public; later, all three levels, two of which now feature restaurants, would be reachable by stairway or one of eight elevators.

Millions of visitors during and after the World's Fair marveled at Paris' newly erected architectural wonder. Not all of the city's inhabitants were as enthusiastic, however: Many Parisians either feared it was structurally unsound or considered it an eyesore. The novelist Guy de Maupassant, for example, allegedly hated the tower so much that he often ate lunch in the restaurant at its base, the only vantage point from which he could completely avoid glimpsing its looming silhouette.

The Eiffel Tower Becomes a Permanent Feature of the Paris Skyline

Originally intended as a temporary exhibit, the Eiffel Tower was almost torn down and scrapped in 1909. City officials opted to save it after recognizing its value as a radiotelegraph station. Several years later, during [World War I](#), the Eiffel Tower intercepted enemy radio communications, relayed zeppelin alerts and was used to dispatch emergency troop reinforcements. It escaped destruction a second time during [World War II](#): Hitler initially ordered the demolition of the city's most cherished symbol, but the command was never carried out. Also during the German occupation of Paris, French resistance fighters famously cut the Eiffel Tower's elevator cables so that the Nazis had to climb the stairs.

Over the years, the Eiffel Tower has been the site of numerous high-profile stunts, ceremonial events and even scientific experiments. In 1911, for instance, the German physicist Theodor Wulf used an electrometer to detect higher levels of radiation at its top than at its base, observing the effects of what are now called cosmic rays. The Eiffel Tower has also inspired more than 30 replicas and similar structures in various cities around the world.

Now one of the most recognizable structures on the planet, the Eiffel Tower underwent a major facelift in 1986 and is repainted every seven years. It welcomes more visitors than any other paid monument in the world—an estimated 7 million people per year. Some 500 employees are responsible for its daily operations, working in its restaurants, manning its elevators, ensuring its security and directing the eager crowds flocking the tower's platforms to enjoy panoramic views of the City of Lights.

Einstein and the Quantum ***a Book By Douglas Stone***

reveals for the first time the full significance of Albert Einstein's contributions to quantum theory. Einstein famously rejected quantum mechanics, observing that God does not play dice. But, in fact, he thought more about the nature of atoms, molecules, and the emission and absorption of light--the core of what we now know as quantum theory--than he did about relativity.

A compelling blend of physics, biography, and the history of science, the book shares the untold story of how Einstein--not Max Planck or Niels Bohr--was the driving force behind early quantum theory. It paints a vivid portrait of the iconic physicist as he grappled with the apparently contradictory nature of the atomic world, in which its invisible constituents defy the categories of classical physics, behaving simultaneously as both particle and wave. And it demonstrates how Einstein's later work on the emission and absorption of light, and on atomic gases, led directly to Erwin Schrödinger's breakthrough to the modern form of quantum mechanics. The book sheds light on why Einstein ultimately renounced his own brilliant work on quantum theory, due to his deep belief in science as something objective and eternal.

A book unlike any other, ***Einstein and the Quantum*** offers a completely new perspective on the scientific achievements of the greatest intellect of the twentieth century, showing how Einstein's contributions to the development of quantum theory are more significant, perhaps, than even his legendary work on relativity.

1. Charger

Plugged into a standard 120 or 240 VAC household outlet, the charger converts alternating current to direct current to charge the traction batteries.

2. Batteries

Sealed or vented, and in an array of possible voltages, the battery bank provides the "fuel"—and fuel storage—for the vehicle.

3. Controller

The brains of the EV, the controller adjusts the amount of energy sent to the motor based on signal input from the throttle potbox.

7. Main Contactor

The EV's main on/off control, this relay is often governed by a standard key switch.

8. Instrumentation

The right meters are imperative to keeping tabs on your EV's performance. Standard are a voltmeter, ammeter, and, sometimes, an amp-hour meter.

9. Emergency Disconnect

This emergency breaker/switch automatically disconnects the battery bank in the unlikely event of a short circuit. The switch can also be used to manually disconnect the battery bank.

10. DC/DC Converter

Converts traction battery pack voltage to standard 12 VDC to run common automotive electrical accessories.

4. Potbox

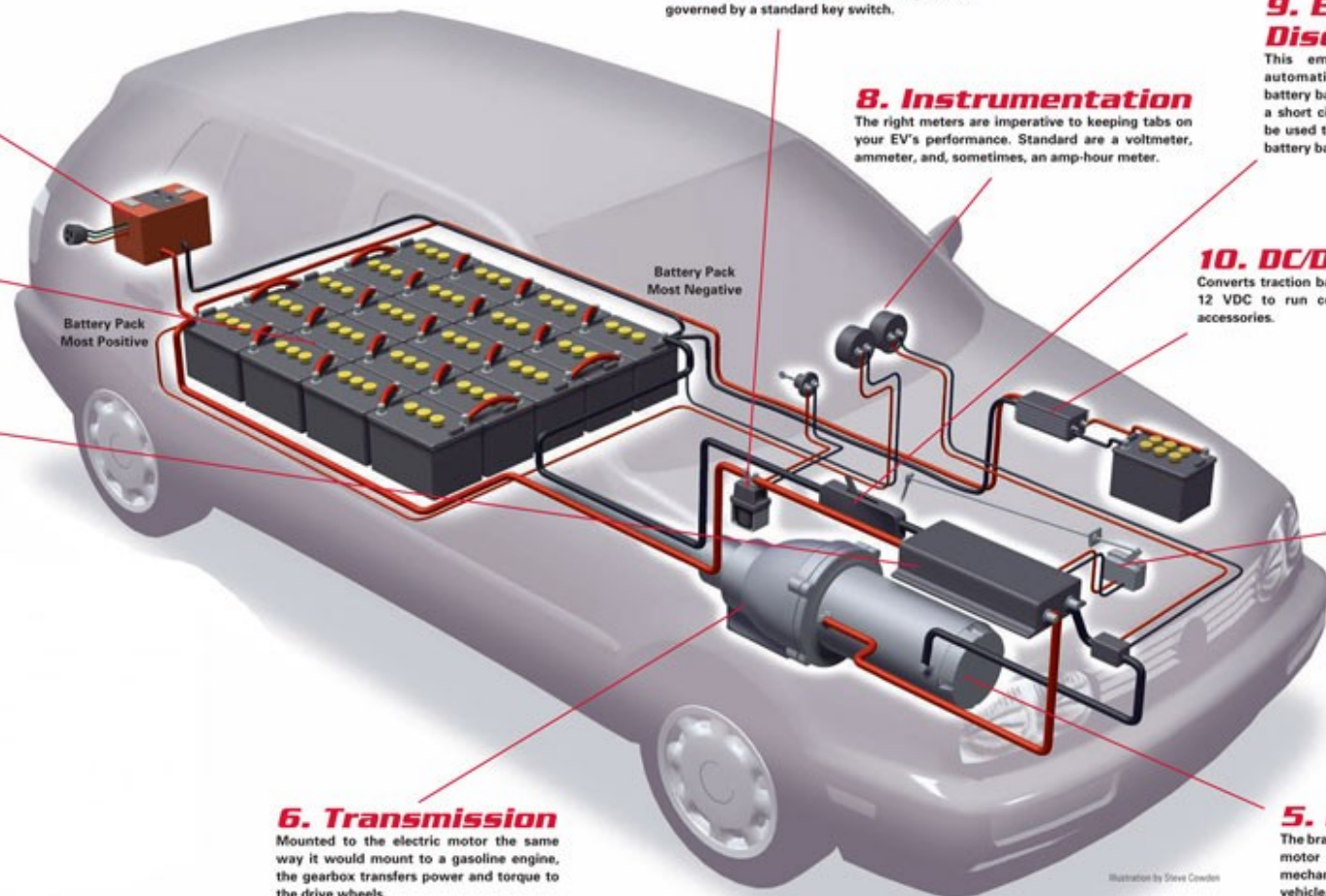
Converts the motion of your throttle pedal into an electrical signal for the controller.

5. Motor

The brawn of the EV, a DC or AC electric motor converts electrical energy into mechanical energy, which moves the vehicle.

6. Transmission

Mounted to the electric motor the same way it would mount to a gasoline engine, the gearbox transfers power and torque to the drive wheels.



Idea for Field Day. The hurricanes and floods last summer gave us a good glimpse on what a real emergency looks like. Seems that a mayor problem was the collapse of the electric grid in Puerto Rico. Other places may not have gotten the coverage, but in general a lot of local power occurred. So communicating in an emergency is desirable. This is what hams train for yearly on field day weekend.

Gasoline and portable generators are used mostly for field day. However, there is some communication going on using Solar Power. I have also seen where a group from northern Europe was using a generator driven by a water wheel. In places that have steady wind, a windmill would be feasible as well.

Anyway, I had this idea of using the large propulsion battery of an electric car. The above picture is a very good representation of the main components of an e-car with brief explanations. As you can see the main battery (item 2) uses 20 12V-batteries which are in series adding up to 240V. This is potentially a lethal voltage and reason why the manufactures don't like it when you play with it.

Looking a little further, however, you find, there is another 12V battery, which is for the lights, the electronics etc. Like in any car! The one difference is, this battery is being recharged from the main battery as it is losing capacity (item 10). That amounts to quite a number of kWh. Probably enough to run the usual transceiver the entire field day from that battery. The battery is usually connected to the cigarette lighter socket. Gerd, WB8iFM