

# **Myla Madson's**

**Complete Guide To:**

## **Building and Installing a**

# **Hydrogen Generator**



# DISCLAIMER & SAFETY

Okay, first things first. If you need to warn people that the coffee in their coffee cups may be hot, I guess I'd better cover my own rump as well and cover some legal disclaimers and safety issues.

I DID NOT invent or discover this technology. It has been around for nearly a century and is in use on thousands of vehicles all over the world and this model is based off of Patrick J Kelly's model which is public domain knowledge.

The idea behind this technology is to produce a burnable fuel that you create on demand and do not have to store on your vehicle. This makes for a very safe system and if you follow the procedures and safety notes, you should not have any problems at all.

Of course I must say that you are doing this at your own risk and that I can in no way be held responsible if something bad should happen. I suppose there is the possibility you could damage your vehicle or hurt yourself although I have never heard of such a case.

Anyway, use your head and trust your gut. Be careful and follow the directions completely. This system is based off existing technology and is public domain meaning I have put it in convenient form for your use but did not invent the technology or techniques discussed in this book.

So, to repeat: You acknowledge that by incorporating these plans and installing the product described you accept full responsibility for any damages or injuries and will not hold us liable. This book is written as a guide to building and installing a hydrogen generator invented by someone else, not me.

It is advised that you make sure you are in compliance with any and all state and federal emissions guidelines and standards. You should verify your vehicle still passes all emissions tests after installing the hydrogen generator.

You understand the inherent dangers and potential risks and damages possible relating to exploratory technology and in no way hold us liable should these arise from use or misuse of these plans.

So, are we ready to begin? Great! Let's start with exactly what this system is and what it will be doing inside your vehicle.

# FREE ENERGY

Nothing in life is free but we are getting about as close to that definition as possible.

The system you are about to build and install on your vehicle creates a combustible fuel out of water known as Brown's Gas, named after the some what famous professor Yull Brown who originally researched this technology.

Brown's gas is basically water broken down to its core elements of hydrogen and oxygen.

The structure is actually  $\text{HHO}$ , meaning two hydrogen atoms bonded together in the presence of an oxygen atom.

Brown's gas burns wonderfully and contains tons of energy...nearly three times that of gasoline.

Now understand here that you are not going to run your car on Brown's gas alone but rather a mixture of conventional gasoline and Brown's gas which will improve the efficiency of combustion, allow your engine to run cooler and cleaner and produce less harm-full emissions into the environment.

The generator you are going to be building is based on sound principles, uses very little electricity and very little water.

It is simple and inexpensive to build and install and should allow you to see at least 15-25% savings in your fuel bill and up to 50% when coupled with other fuel saving measures mentioned in this book.

This system is practical and does work, although it is often considered the little brother of a more powerful model that uses modulating current to break the water molecule apart instead of a steady stream of voltage like this one does. However, a modulating system is much more difficult and expensive to build despite its author's claims and is not practical for someone new to this technology.

I had considered which one to feature in this book and thought it appropriate to stick with the one I myself had built and am currently using. I plan to build the other one this summer with the help of my Ex-husband (he owes me). This is the one he is using and getting 75% increase in gas mileage.

Like I said, it is harder to build, more expensive and the parts can be hard to find. If you are still interested in trying to build one, by all means, go for it. You can pickup the guide at <http://indigo911.centemax.hop.clickbank.net>

So, let's start with the components of the system and a parts list so you can gather the materials needed and get started!

# THE ELECTROLYZER

The heart of this system is the electrolyzer. This is where the action takes place. We have a container full of distilled water and a little baking soda and our goal is to separate the hydrogen atoms from the oxygen atoms and we do this by electrolysis.

The great thing about elements is the fact that they either have a positive charge or a negative charge. Hydrogen is positively charged and oxygen is negatively charged and since opposite charges attract one another, they bond together to form a water molecule.

Yes, it is more scientific than this but basically this is the theory we are working with and if we can separate the two elements from one another, we would have hydrogen to burn without having to create it in some dirty factory, ship it across the country in big fuel trucks and store it in tanks where it could explode...especially tanks in your vehicle! Pure Hydrogen gas is explosive and dangerous and of course, you would still be at the mercy of who ever controlled it and still have to "pay at the pump".

Not so with this little device which could, with complicated modification, work without the aid of fuel and give you a true water powered car.

For now though, we would do well to reduce the amount of fuel we are currently burning and send a message demanding this technology be made available to everyone. Water is an abundant renewable resource that is good for the environment and falls from the sky freely. Unless the government figures out a way to make it stop raining, we can fill up whenever we want...and for FREE!!

Okay, so how do we separate the water molecule? Well, in our container filled with water, we have two electrodes; one positively charged and one negatively charged.

One electrode is tugging on the oxygen atom and the other on the hydrogen atoms of each water molecule. This tug of war aligns all the water molecules between the electrodes and eventually rips them apart to create HHO, or Brown's gas.

The modulating current does a better job of turning on and off the current at a certain voltage to increase the production of gas. The system we are building works well also to produce gas we can burn.

The vacuum of the engine draws air into the container and expels this mixture of air and HHO and delivers it to the air intake of the engine where it is mixed with conventional fuel. This effectively increases the octane level of the fuel and allows for more complete combustion.

The container used for this electrolyzer is a standard canning jar also known as a Mason jar. Although they are glass, they are extremely strong, resist heat, and allow you to

monitor water levels. I'm experimenting with different plastic containers but each have their limitations to this point so I'm sticking with the glass jar for now.

The only problem you may have using the jar is if you bang it around or have a clumsy mechanic whack it with a wrench or something.

As far as I know, there have been no failures using glass jars and it actually should outlast the car you install it in!

The one thing you will have to do is use a plastic lid. Don't worry, they are easy to find and I even give you a list of suppliers for every part in this system. I doubt you will have to go further than your local hardware store and auto parts supplier to get everything you need, so don't worry...parts are cheap and readily available.

You are going to need various barbed fittings, automotive tubing, some hardware (nuts & bolts) some stainless steel wire, an adjustable anti-siphon aquarium gang valve, some wiring, glue, etc. The only thing I can think of that you may have to order is the check valves and possibly the stainless steel wire. You can use an aquarium check valve but one that opens at a lower pressure is much better for our use. Go to the website provided or call the toll free number to order. Note: I actually removed the check valves in my vacuum hoses and the system is actually working better without them. I haven't had any issues with safety so you might want to try this as well.

There is a complete parts list along with photos and where to get each part on the following page.

# PARTS LIST

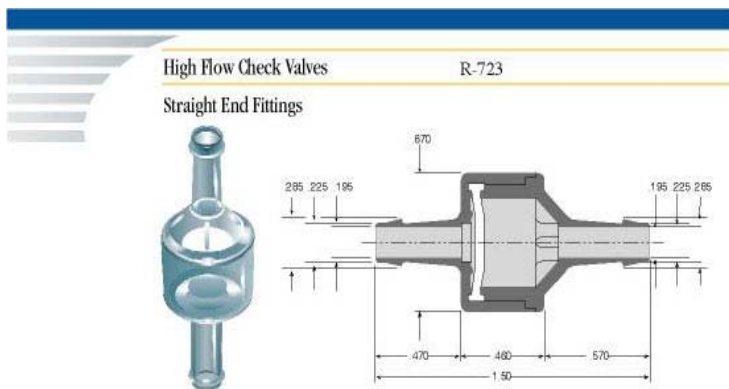


I know it seems odd to be building a device that creates combustible gas in a glass jar, but it is safe and I have not found anything else that comes close to the durability, affordability and practicality of the regular mouth Bell mason jar, one pint size.

You can pick a case of these at Wal-Mart, you will need two for this project.



It is not advisable to use the metal lid that comes with the jar for obvious electrical reasons. You need to use a plastic lid. Wal-Mart sells these lids in the same department as the jars. They only stock the small mouth lids so make sure you get the small mouth, or “standard” size jars.



You can get this check valve from <http://www.resenex.com>

Part number is R-724 and prices fluctuate but the valve is generally inexpensive. You can use an aquarium check valve readily available at most pet stores but this one works much better.

This check valve is the only thing you may need to order. I found the lids available with the jars at my local department store. Make sure it is the exact same lid I have listed above though. If you are not sure, order the lid from Kitchen Krafts. The check valve we use for the safety relief on top of the jar can be purchased in the fish department at Walmart. This is the blue valve with the white arrow you see on the picture of the completed system, part number PCH-V



Vacuum hose tubing can be found at your local auto parts store. Use standard vacuum tubing (make sure it is 5/32" inside diameter). This tubing can be purchased by the foot or by the spool. This tubing can be used for other projects around the house so I would get the spool. It cost around \$16.00



These Universal Automotive Tees are affordable and can be cut to fit whatever size hose you are working with. You will be using 1/4" hose but you may have to splice it into a larger hose on you vehicle and this tee is perfect for this job. Get at any auto parts store



These barbed elbows can be found in the irrigation (gardening) department at your local hardware store. They are cheap and perfect for our application. You can get the elbows, couplings and Tee's all at Home Depot. Elbow part number is R314C



You can also find barbed couplings in the same department at the hardware store. Home Depot part number for coupling is R312C If you want to use the irrigation Tee instead of the automotive Tee the part number is R307C.



This is called an anti-siphon aquarium gang valve (2-1/2 way valve) and it is marketed by Wal-Mart meaning it will always be in their fish department wherever you are in the country or world, order on-line if you don't have a Wal-Mart.

The part number is 9047/2S-C Manufactured by Aqua Culture

NOTE: You will also need various electrical fittings which are covered in the wiring section. I recommend you read through this guide at least twice before buying any parts. Highlight any parts you may need along with their model number and where to acquire them.

#### ELECTRODES:

The most important part about selecting what type of wire to use for the electrodes is corrosion resistance. You must remember we are separating hydrogen from oxygen and oxygen is extremely corrosive to metals.

I used stainless steel because it was locally available and inexpensive. Stainless steel comes in different grades and I recommend you use grade 316L.

It is a little more expensive than lower grades but is much more resistant to corrosion and will last longer.

I'm planning on replacing stainless steel with Nickel Titanium that's even more resistant and not cost prohibitive just more difficult to find. You can get it at any orthodontics supplier, just do an Internet search to find a source you can order from.

The size I try and use is 0.050 "

Platinized Niobium is what I'd love to use but it cost about thirty cents an inch but will last forever. You can get it at any orthodontics supplier as well.

You will need about 100" of wire. DO NOT use copper or aluminum as these will corrode very quickly.



YOU CAN GET ALL OF THE FOLLOWING ITEMS AT HOME DEPOT:

The electrode terminals are made from standard 1/4" bolts, nuts washers and wing-nuts to secure the wire leads.

You'll need electrical wire as well, both red and black, 14 gauge that you can get at any auto supply store. Also pick up a pack of Butt Terminals 14-16 AWG 2 and a pack of Spade Terminals 14-16 AWG, #10 2

Get a pack of small cable ties

Get an inline fuse holder with a 10 amp fuse.

You'll need a gallon of distilled water and a box of pure baking soda.

You will need a small sheet of 1/4" Plexiglas cut into four pieces 2.15" x 5.75" for the electrode towers.

You will also need a tube of crazy glue and a tube of Plumbers Goop ( or JB Weld)

6" of 1/4" clear vinyl tubing

## LET'S START BUILDING!

The first thing we are going to build is the tower that we wrap our wires (electrodes) around.

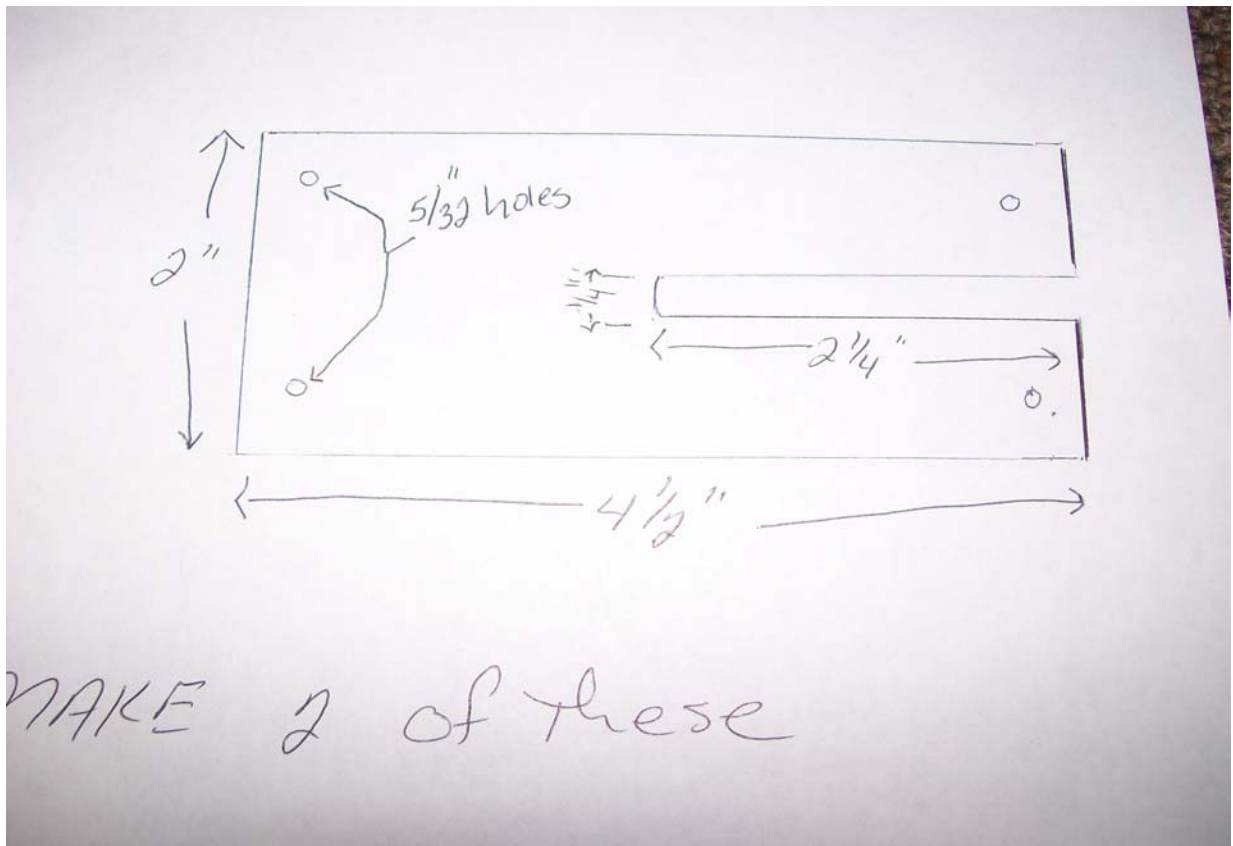
These are constructed with  $\frac{1}{4}$ " Plexiglas that you can get at the hardware store. I used yellow for visual purposes and got it at a craft store, but clear Plexiglas is fine.

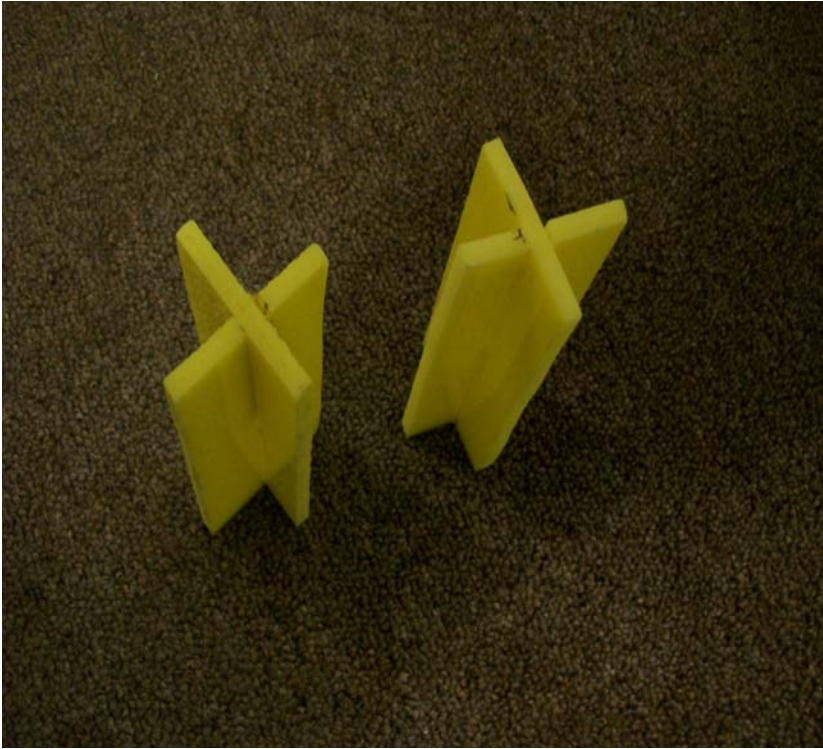
You are going to need to cut four pieces into the same exact measurements in order to build two towers.

Start by cutting four pieces  $4.5$ " x  $2.0$ ". Drill four  $\frac{5}{32}$ " holes  $\frac{1}{4}$ " from the edges.

You will then cut a notch in the center of each piece so two pieces will slide over each other and form an X.

This is the plan I drew out and then transferred to the Plexiglas. You can glue it with contact cement or just draw the dimensions onto the Plexiglas with a permanent marker.





This is how your two Plexiglas towers should look after you put them together.

I had a neighbor cut the pieces for me although after watching him I know I could do it myself.

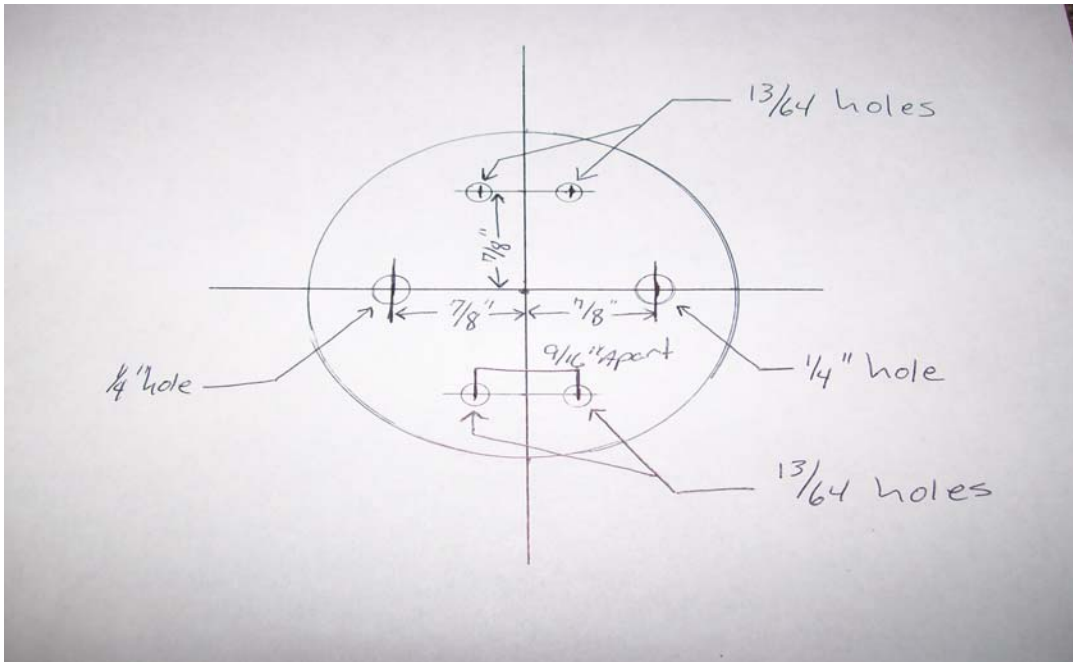
He used a jig saw with very fine teeth. You could also use a ban saw or a scroll saw.

I tried using a hacksaw blade to see if it would work, and it does, but it takes a while so I would definitely use a jig saw or a neighbor!

Glue the two pieces together with Plumbers Goop and let set up for a couple of hours while you prepare the other parts.

We will be working on the plastic lid next and every one I have ever come across has a little plastic bump on the middle of the lid, the inside of the lid. It needs to be scraped away with a knife, just be careful not to cut into the actual lid, just scrape off the bump.





Next we are going to drill the holes for the hose connections, relief valve, air intake and electrode terminal connections. You will be drilling six holes in the lid, four holes are  $13/64$ " in diameter (marked on drill bit) and the other two are  $1/4$ ". You will need to use a compass and draw a  $2\ 3/4$ " circle on a piece of paper so we can create a template to mark your holes for drilling.

Dissect the center with center lines and measure out  $7/8$ " on each line and make a dash, the center of this dash is where you will drill holes for the  $1/4$ " bolts. On the  $13/64$ " holes you will need to measure and have  $9/16$  of an inch between the two centers. Refer to diagram.

After all of your holes are drilled, super glue washers over the holes on the inside of the lid and the top side of the lid ensuring they are aligned perfectly with one another so the hole diameter is not decreased.

Use super glue for this step instead of plumber's goop as it sets up and bonds much more quickly allowing you to move to the next step.





Allow the washers to dry for about twenty minutes before gluing the tower to the inside of the lid. Carefully center the tower on the lid and glue with super glue. Run plumbers goop around the edges of the tower where it meets the lid. Let dry for twenty minutes while you prepare the electrodes.

Take the stainless steel wire and place the two ends together and find the center point. This will double the wire. We will loop the center around the bolt and twist the wires together. You can use pliers to hold the ends and wrap the loop around a nail hammered into a board in order to make twisting the wire easier.





Now run the bolt up through the bottom side of the lid and thread the wire through one of the holes you drilled in the tower.

Start winding the wire down the tower keeping each turn separated by about  $\frac{3}{8}$  of an inch.

Secure the wire by threading it through the hole in the bottom of the tower two or three times and gluing in place with plumbers goop.

Secure each turn on the tower with plumbers goop as well.

Repeat this process with the second wire making sure you keep an even distance between all the wires.

I like to double up the wire on the negative side that will be exposed to corrosive oxygen.

Make sure that you use a lock, split washer, on the top side of the lid before installing the nut.

This will ensure engine vibration cannot loosen the nut and interrupt electrical contact.





Insert the plastic elbows in the holes and at the angles shown.

You may have to sand down the barbed end a little to get it to fit through the washers.

Once the fittings are in place, use plumbers goop to completely seal the penetration both on top and below the lid.

You can also glue the check valve in at this time but I advise you to wait until a later step.



I included it here as a reference point for your convenience.

Next, take the aquarium gang valve and slide the actual valve out of its bracket.

The manufacture sometimes puts a dab of glue on the back of the valve to hold it in place but I have always been able to break it free and slide the valve out of its bracket.



You can discard the bracket. We will not be using it in the fabrication of the hydrogen generator.



Set the two bottles with a half inch clearance between them. You are now going to build the air intake manifold.

I have built three of these systems so far and have always used four one inch sections of vacuum hose to create the manifold. Make sure you have set everything up correctly before cutting the hose. If you need to shorten or lengthen the tubing a bit, that's okay. Just make sure your bolts line up horizontally and your elbows are uniform.

Where the two elbows on the air intake manifold penetrate the cap, you need to insert a 4 inch piece of clear vinyl tubing. You get this vinyl tubing in the fish department at Wal-Mart where you got the gang valves.

This tubing goes down to the bottom of the jar and allows you to see the air coming into the chamber. When the system is installed and running, the jar will be under a vacuum and air will enter the valve and travel down the tube to the bottom of the jar. You want to adjust the valves until you see very few bubbles in the tube. Slower and fewer is always better.







Now we want to build the exhaust system where the hydrogen gas leave the bottle and is directed to the engine.

As you can see in the diagram, I have used irrigation Tees to join the hose together.

You will need to measure the hoses and build them to resemble the picture above.

It really is quite simple and although I follow the same pattern each time I build one of these generators, these sections of hose are always different in length by a few millimeters.

Just take your time and cut the hose accurately and have it look like the pictures. I took several different angles so you can see exactly how yours should look when you're done.

You will then glue the check valves in place paying close attention to the direction of the arrow on the valve. It points away from the bottle and will allow gases to escape if the bottle becomes pressurized. The bottle should always be under a vacuum so if you feel air coming out of this valve, something is wrong and you should shut the system down.





This is what your final system should look like. We still have to add the wiring and I am going to give you an idea to secure the system in your vehicle, but for now, sit back and admire your creation.

**ALWAYS** make sure you check that each and every penetration through the lid is air tight and sealed with plumbers goop.

# ELECTRICAL

The first thing I did before beginning the wiring process was paint the wing nuts. I painted two of the wing nuts black to denote the negative connection to the battery. You can use a black marker as well. You can also paint the other two wing nuts red, but I like to save money and did not want to buy a can of red paint for two wing nuts. Besides, you are using black and red wire so it is easy to keep everything separated.

Also, if you used the same type and size wire for both electrodes, it does not matter which is positive and which is negative anyway. Oxygen is corrosive so I'm considering doubling the thickness of that electrode on my next generator so you would need to keep this electrode on the positive side of the system in which case I would advise painting the wing nut red.

We need to supply the generator with 12 volts of DC current which is exactly what your car's battery provides. However, we only want this power when the engine is running so we must wire our system so it only gets power when the ignition key is turned on.

The first thing we will do is wire the top of our generator. You can make connections and splices with wire nuts but I highly recommend using the proper connections to prevent generator failures due to loose wiring.

Take a look at the top of the generator. In order to make these jumpers, use 14 gauge wiring that you can get at Home Depot or auto parts store and the terminal ends that will slip over the 1/4" bolts. Slip the wire into the connector and crimp down with a pair of pliers to secure the wire in the terminal connector.

You will notice that I used male spade clips at the end of the two leads. This is for convenience so you can install your generator without wires dangling all over the place.

The terminal ends, called ring terminals can be purchased at Home Depot or auto supply store. Make sure it fits 14 gauge wire and will slip over a 1/4" bolt, or "stud".





I chose to install an inline fuse right off the positive terminal at the generator even though I got my power out of the vehicles fuse box.

There is a nifty adapter that allows you to wire this into the fuse box without resorting to the old fashioned way of sticking the wire in the fuse holder and reinserting the car's fuse



Isn't that clever? You just remove the fuse in your car's fuse box, insert this adapter and you now have to separate circuits protected by two separate fuses. The red lead would attach to the red lead of the generator. **Make sure you use a fuse that is only energized when the engine is running, fuse usually marked with ign. Lettering.**

I highly recommend you do this so you don't have two devices on one fuse. I picked up this adapter for about six bucks at Auto Zone.

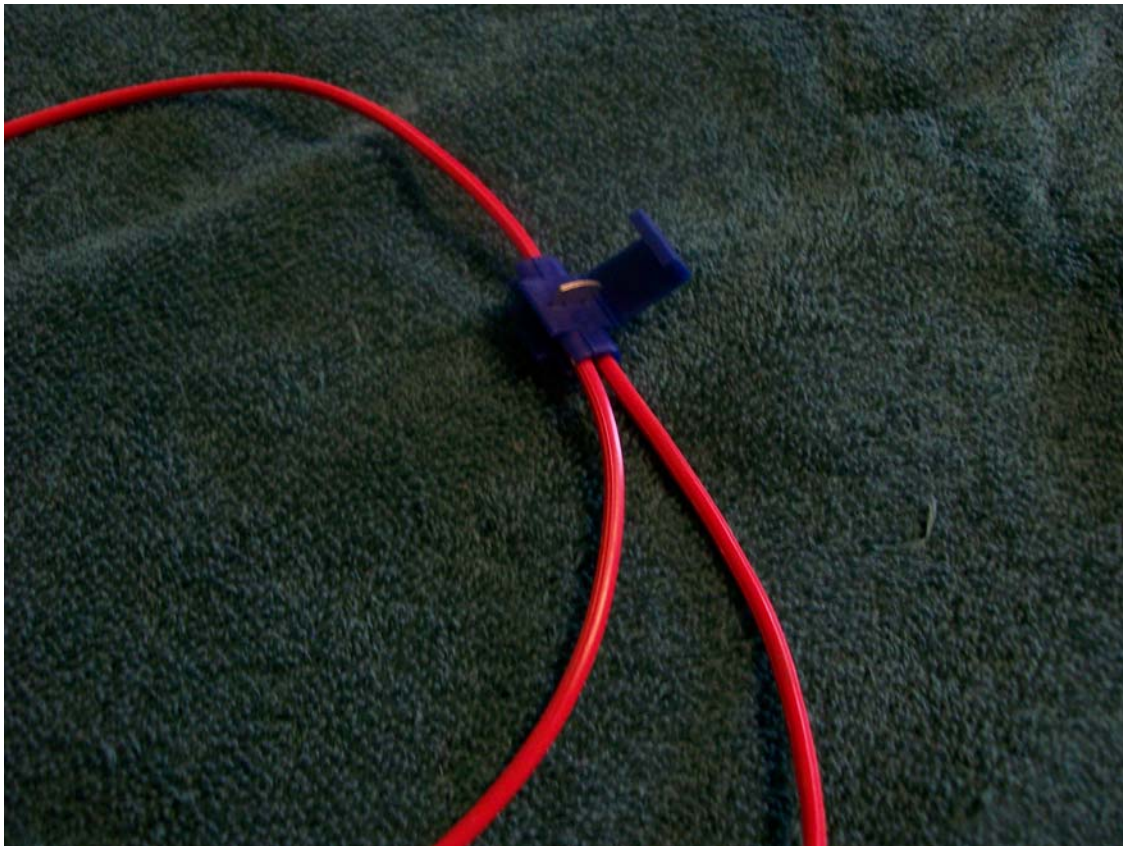
I'm using a twenty amp fuse here because when you add the water, you will also add baking soda to act as the electrolyte. The more you add, the more gas produced but you will also speed up corrosion. I recommend you start with a teaspoon and a fifteen amp fuse.

Once you have the wiring done on the generator, you need to install the wiring on the vehicle and run the power wires close to the location of your generator.

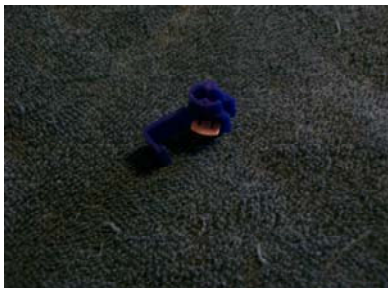
If your car does not have a fuse box (usually located inside the vehicle under the dash) or you can not find a penetration through the firewall and into the engine compartment, you can simply splice the positive (red) wire in into an existing circuit that is energized (or has power available to it) when the ignition is on.

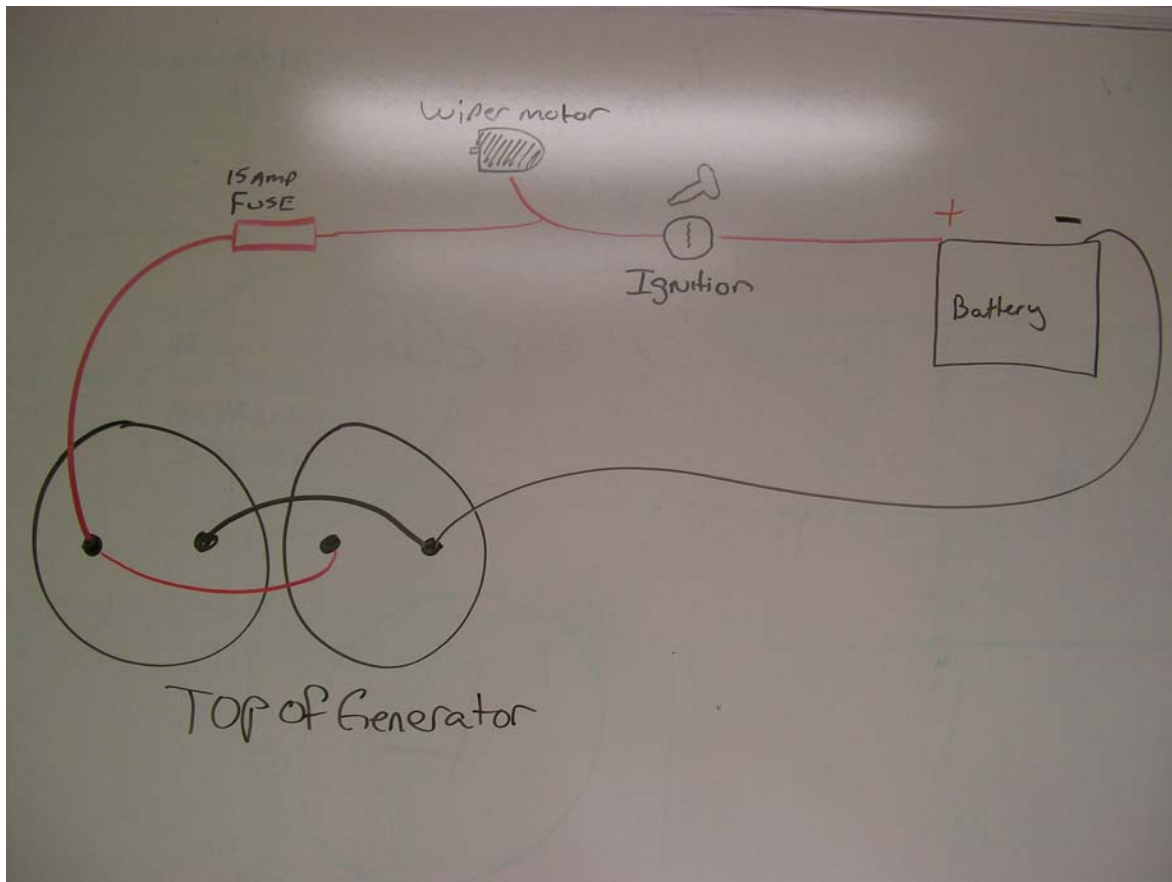
The wiper motor is perfect for this. Make sure you use the live positive wire going into the control switch and not the one coming out or your generator will only work when the wipers are on!

Make sure you install the 15AMP in-line fuse in the positive wire going into the generator or else your car's electrical system will not have protection against shorts, which can cause a lot of damage.



This “tap splice” allows you to splice the generator wiring into existing wiring of your vehicle. You should use this splice instead of wire-nuts. Make sure it fits 14 Gauge wiring. You insert the main power wire in one end and the original component and the generator leads in the other end. You fold the lid over and crimp with a pair of pliers. Make sure you squeeze really tight to make a good connection. I got this part at Auto Zone (part number 70026).





Here is a picture I drew at a class I was actually teaching on how to build a hydrogen generator. The wiring is pretty simple really. I'll interject here that on some newer vehicles, the oxygen sensor will negate your increased fuel savings for compensating for the higher octane fuel you have created. This is the way auto makers and big oil screw the consumer and make sure we continue to pump gas and buy new vehicles.

You can build a system that bypasses, or tricks the sensor into allowing you to get the increased mileage, but an inventor came up with a component that you can purchase and install very easily and pays for it self in just a couple fill ups. I did this and am glad I did.

Here's the link: [http://www.eagle-research.com/store/index.php?main\\_page=product\\_info&products\\_id=16](http://www.eagle-research.com/store/index.php?main_page=product_info&products_id=16)



# INSTALLATION

Before installing the generator, you need to fill both jars with water until the level is an inch from the top. Add a ½ teaspoon of baking soda to each jar and secure the jars to the lids.

When installing the unit, you want to locate it in a place as far away from the heat of the engine as possible.

I understand this may be difficult since the engine compartment is where the majority of generators will be installed, but for practical purposes, “far away”, means the furthest location from the actual engine block.

I inserted a ½” thick piece of styro-foam between the bottles and used bungee cords to hold the bottles together. I then found a plastic parts tray at Home Depot and mounted it to the inside fender and placed the bottles in the tray, securing with two additional bungees.

Remember, you will have to install the system in a location that allows you two add water to the bottles. Water should be checked on each fill-up and kept at a level of one inch from the cap. Be sure to add baking soda when you replenish the water.

## VACUUM HOSES

NOTE: Make sure you keep the vacuum hose length at four feet for safety reasons, even if you have to coil it up.

You will note there are two exhaust hoses coming out of the bottle. One of these hoses goes into the air intake, after the air filter if possible, and the other will be spliced into one of your engines vacuum hoses using the universal automotive tee described earlier.

DO NOT splice into your brakes Vacuum hose!!!! This is usually a large black hose tying into the brake booster ( a large drum mounted on the fire wall ).

Most air intakes have a plastic housing guiding air from outside the vehicle into the air intake of the engine. The air filter on newer vehicles is usually mounted somewhere in line. I drilled a 3/16” hole and glued a barbed irrigation coupling into the air intake housing.

For the other line, I found a ¼” engine vacuum hose and spliced my line into using the universal automotive Tee.

The reason we use the two supplies is the fact that the engine produce different vacuums at idle and at running speed. There is more vacuum during idle at the engine than there is at the air intake and vice versa during high RPM.

You can install check valves in these lines but I found the system works better without them.

## ADJUSTMENTS

After you have installed the system, you need to adjust the air intake valves.

Turn both valves on the aquarium gang valve clock-wise until they fully close. Turn back counter-wise two full turns on both valves.

Remove the in-line fuse from the generator so no power is going to the electrodes.

Turn the engine on and watch the bubbling in the clear vinyl tubing. Turn the valves clock-wise until you have very little bubbling in each hose. This is the advantage of using the glass jar, you can see what's going on in the generator.

After the air intake is adjusted, turn the engine off and reinsert the fuse. Turn the engine back on and watch the bubbling action between the spiraling wire electrodes. A yellow-brown gas will begin to form and within a minute, the sound of your engine will change.

You will notice it running quieter and much smoother. Make sure you see very little bubbling in the vinyl hose. A little is better than a lot. Adjust the air intake accordingly.

And there you have it. Enjoy your hydrogen generator!!!

Here's the link I promised on more ways to save money on energy:

This book has over 1600 pages of energy saving technology both for your car and your home!

<http://www.MylaMadson.com/megaenergysavingsbook>

## IMPORTANT NOTES:

A company who is trying to sell a very expensive version of this device has come out with a warning that the generator creates dangerous levels of carbon monoxide because of the use of baking soda.

This information is false and misleading and done only to discredit their competition. Thousands upon thousands of people are running their cars on this very system and the idea that it produces dangerous amounts of CO is ridiculous and borders on criminal conduct.

I have had a technician test the gas produced and you can rest assured this device is not dangerous in any way shape or form.

Make sure you wire the system properly to the fuse box. Do not wire into a fuse that is always hot. When you look at your fuse box cover, you will see that some fuses are designated by the letters ign. This means these fuses are only live when the ignition is on.